

Final

**SITE-SPECIFIC
ENVIRONMENTAL BASELINE SURVEY
GROUP III - BUILDINGS 114,125,128, and 134**

**Hunters Point Shipyard
San Francisco, California**

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EXECUTIVE SUMMARY

In order to comply with applicable regulations and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and to provide a basis for a Finding of Suitability to Lease (FOSL), a Site-Specific Environmental Baseline Survey (SSEBS) has been performed for four lease areas (Buildings 114 [formerly Building 113A], 125, 128, and 134) at the Hunters Point Shipyard (HPS), San Francisco, California. The scope of the survey includes review of relevant reports of previous site investigations, interviews with individuals knowledgeable of the lease area, and a field visit and inspection to assess current conditions.

The four lease areas are located in Parcel B of the HPS, as defined by the U.S. Department of the Navy (Navy) Base Realignment and Closure Cleanup Plan. The buildings were constructed between 1943 and 1965 and are of wood-framed construction except Building 134 which is a concrete warehouse flanked by wood-framed wings. Historically, the buildings were used for quality and reliability assurance (Q&RA) non-destructive testing (Building 114), submarine cafeteria (Building 125), shop service and work control center (Building 128), and machine shop and Q&RA offices (Building 134). The Naval Facilities Engineering Command, EFA West, intends to lease Buildings 114, 125, 128, and 134 at Hunters Point Shipyard to the San Francisco Redevelopment Agency (SFRA) of the City and County of San Francisco, who will in turn sublease the properties.

The SFRA will hold the future master leases and be designated as the lessee. The date of the lease transfer has not been determined. The lease area buildings are currently leased with the exception of the north end of Building 134. There are four separate individuals currently holding master leases (lessees), and approximately four individual tenants (sublessees) subleasing Building 125. Building 114 is used for a Q&RA non-destructive test facility; Building 125 is occupied by a cabinet maker, a photographer, and artisans; Building 128 is used for vehicle storage and boat construction; and Building 134 is used by a refrigeration service contractor.

The site inspection and information reviewed indicates that hazardous substances have been stored and/or generated by the Navy in all of these lease areas except for the submarine cafeteria (Building 125). The lease areas are located in installation restoration sites IR-42 (Building 114), IR-24 (Buildings 125 and 128), and IR-25 (Building 134). Asbestos-containing material (ACM) is present in all of the buildings. Abatement of friable ACM has been completed in Buildings 114 and 128. Abatement of ACM has been completed in Building 134 but final inspection has not been completed. Abatement of friable ACM for Building 125 is scheduled for December 1996. Implementation of an ACM Operations and Maintenance (Oand M) Plan will be required by the Navy.

Based on the age and the type of construction of the four buildings, lead-based paint is possibly present; peeling paint is evident in all of the buildings. The lessee will be

responsible for managing all LBP and potential LBP in compliance with all applicable laws and regulations. The lease areas are currently designated as non-residential areas.

Hazardous substances are being used in all of the buildings. These substances include artisan supplies, resins, solvents, and gauges containing a low-level radioactive source. Notifications regarding the proper handling and disposal of hazardous substances were not observed in the buildings during the field survey.

Because appropriate administrative controls can be established to protect workers from the hazardous substances identified within portions of the lease areas, the potential environmental risks associated with the lease areas can be managed except for portions of the Building 134 lease area. PRC Environmental Management Inc. (PRC) has completed a human health risk assessment (HHRA) for Parcel B that is included in the Parcel B Remedial Investigation Draft Final Report, Hunters Point Annex, San Francisco, California, dated June 3, 1996. Based on the HHRA, current health risks are within a range that can be managed and consequently the associated hazards are not significant. Under the Reasonable Maximum Exposure (RME), the Excess Lifetime Cancer Risk (ELCR) is less than 10^{-6} and the Hazard Index (HI) is less than 1 for current workers at the lease areas in Parcel B (PRC 1996, Parcel B Feasibility Study, Volume II, Section 5.2.1). There are no other risks under the current land use conditions, and the buildings and associated outdoor lease areas are suitable for use if appropriate lease restrictions are incorporated. At the Building 114 lease area, the trailer containing the above mentioned gauges is secured. The transformer room of Building 128 will be restricted in use because of physical hazards and the presence of chemicals including polychlorinated biphenyls and ACM. The lessee should be notified by the Navy of the hazardous substances detected in the buildings and the surrounding outdoor lease areas, as well as of the need for additional investigations within the lease areas.

1.0 INTRODUCTION

This report presents the results of a Site-Specific Environmental Baseline Survey (SSEBS) for four lease areas (Group III), located in Parcel B at the Hunters Point Shipyard (HPS), San Francisco, California (Figure 1). The U.S. Department of the Navy (Navy) Engineering Field Activity (EFA) West, Naval Facilities Engineering Command, San Bruno, California, is performing SSEBSs and preparing Findings of Suitability to Lease (FOSLs) for 36 lease areas at HPS. On the basis of geographic location and similar past and current uses, these lease areas have been divided into five groups; I through V. The results of the SSEBSs and FOSLs for the individual lease areas will be included in one SSEBS report and one FOSL report for each group. The lease areas in Group III consist of the following buildings and their surrounding areas: Buildings 114 (formerly 113A), 125, 128 and 134. These buildings were grouped together because of their geographic locations at HPS, their similar historic uses (quality and reliability assurance [Q&RA] non-destructive testing, submarine cafeteria, shop service and work control center, and machine shop), and their similar current uses (Q & M non-destructive testing, cabinetry, photography, art work, vehicle storage, boat construction, and refrigeration service contractor). The EFA West intends to lease Buildings 114, 125, 128, and 134 at HPS to the San Francisco Redevelopment Agency (SFRA) of the City and County of San Francisco, who will in turn sublease the property. The SFRA will hold the future master leases and be designated as the lessee. The leases will be administered as a Lease in Furtherance of Conveyance. The date of transfer has not been determined.

1.1 Purpose of Survey

The purpose of this SSEBS report is to summarize existing environmental information on the subject buildings and surrounding areas (lease areas) in order to provide information to the occupants regarding known environmental conditions that could pose a potential risk to human health and the environment, and to provide a basis for land use restrictions and limitations of use by the occupant. This survey is required as part of the leasing of the buildings and surrounding areas, and to assist the Navy in complying with its applicable regulations and obligations under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended (42, U.S.C. 9620 [h]). In addition, this document provides the basis for the preparation of a FOSL for the lease areas in Group III and for any use restrictions that may be imposed. The Navy has searched their records and has determined that no records are present in Navy files indicating storage of hazardous substances at the lease areas. However, the Navy is aware that occupants store and use hazardous substances in the lease areas, and that the occupants perform offsite hazardous substance disposal.

1.2 Scope of Survey

The scope of work for this SSEBS consists of field reconnaissances, review of existing relevant reports for the leases available from the EFA West, and discussions with the Navy and other personnel referenced. In addition, the SSEBS contains information obtained from the PRC Environmental Management, Inc. (PRC) Parcel B Remedial Investigation Draft Final Report, Hunters Point Annex, San Francisco, California, dated June 3, 1996. This investigation did not either include sampling and analysis of building materials, air, soil, water, or other substances, or a risk detailed assessment.

1.3 Report Organization and Format

Following a discussion of the history of HPS in Section 2.0 Background, the report has been organized so that conditions generally common to all lease areas in Group III (soil and groundwater conditions, utilities, absence of potential environmental hazards, surrounding areas, etc.) are discussed in Section 3.0 Site Conditions of Group III buildings. Significant reports consulted in the preparation of the document are addressed in Section 4.0 Review of Existing Reports. Specific lease area conditions (site history, absence or presence of asbestos, significant findings, recommendations, etc.) are discussed in Section 5.0 Site Conditions of Lease Areas. Section 6.0 References, lists the environmental reports consulted, and Section 7.0 is the certification of the SSEBS by the Base Realignment and Closure Environmental Coordinator. In addition, Appendix A provides sampling location details; Appendix B, building profiles from the Baseline Environmental Report (Navy, 1994b); Appendix C, maps of utilities; and Appendix D, Department of Defense (DOD) policies. There are also Figures (1-7) that present lease area locations.

1.4 Human Health Risk Assessment

Screening criteria were developed by PRC for chemical analytes detected in soil and groundwater samples to establish the distribution of affected soil and groundwater and to identify contaminants of potential concern (COPCs) that pose a potential human health risk at Parcel B.

Because of previous Navy and industrial usage at HPS, air, soil, and groundwater samples have been collected, chemically analyzed, and detected constituents were evaluated using the following screening criteria. Soil and sediment analytical results were evaluated using U.S. EPA Region IX preliminary remediation goals (PRG) for industrial and residential land use, Hunters Point ambient levels (HPAL) for metals in soil, the petroleum hydrocarbon screening criteria discussed below, detectable concentrations of hexavalent chromium, and risk assessment criteria for human health based on 0.5-acre exposure areas. Because PRGs are generic and non-site specific values developed by the U.S. EPA based on regionally acceptable risk analyses, and because

HPALs for metals are site-specific values developed by the Navy for the HPS and approved by the regulatory agencies, the screening criteria used to assess the distribution of metals-affected soil is the less stringent of these two values; nonetheless, the detected metals concentrations in the soil samples are used in the human health risk assessment

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Groundwater analytical results are evaluated using (1) U.S. EPA Region IX PRGs for tap water; (2) U.S. EPA Title 40 CFR or California Code of Regulations Title 22 maximum contamination levels (MCLs) for drinking water sources, whichever is more stringent; (3) U.S. EPA National Ambient Water Quality Control Criteria (NAWQC) for the protection of saltwater aquatic life; (4) the petroleum hydrocarbon screening criteria discussed below; (5) detectable concentrations of chromium VI; (6) risk assessment screening criteria for human health based on 0.5-acre exposure areas for COPCs in groundwater from the bedrock water-bearing zone; and (7) qualitative human health risk assessment criteria for volatile organic compounds (VOCs) in A-aquifer groundwater.

Because no federal regulatory guidance is available for screening total petroleum hydrocarbons (TPH) in soil and groundwater, screening levels for TPH as diesel (TPH-d) and TPH as gasoline (TPH-g) were developed for HPS. The development of these screening levels considered both the California "Leaking Underground Fuel Tank" manual guidelines and the risk-based cleanup levels developed for the Moffett Field Air Force Base in Mountain View, California, and the Presidio of San Francisco, California.

The U.S. EPA Region IX PRGs, *HPALs* for metals, MCLs, NAWQC, and petroleum hydrocarbon screening criteria are collectively referred to as the generic "screening criteria". These screening criteria provide a framework in which to evaluate the relative significance of hazardous substances or petroleum hydrocarbons. Although petroleum hydrocarbons are not CERCLA-regulated hazardous substances or hazardous wastes as defined by the Resource Conservation and Recovery Act (RCRA), these compounds are screened in this RI report under the Navy's installation restoration program (IRP) primarily because of concerns raised by the Regional Water Quality Control Board (RWQCB).

Chromium, cobalt, manganese, and nickel are widely distributed at high concentrations in soil at Parcel B. These metals are naturally associated with serpentinite-derived fill materials widely present throughout the parcel and in soils near shallow serpentinite bedrock; therefore, these elevated metals concentrations are equivalent to levels in the source rock and are considered ambient levels.

For investigating and determining the extent of COPCs, PRGs were used as screening criteria for VOCs, semivolatile organic compounds (SOCs), pesticides, and polychlorinated biphenyls (PCBs) in soil and groundwater. Industrial standard PRGs were used to screen metals in soil including detected chromium VI; the above mentioned screening criteria for petroleum hydrocarbons were used to screen (TPH) in soil and groundwater. The concentrations and distributions of VOCs, SOCs, pesticides, PCBs,

and metals in soil and groundwater were then evaluated in the HHRA for a more site-specific evaluation of COPCs.

The objective of the HHRA performed by PRC is to evaluate risks associated with human exposure to chemicals detected at Parcel B. The HHRA evaluates exposures and potential risks under both the current commercial land use scenario and the potential future residential and industrial land use scenarios.

The methodology used to prepare the HHRA was developed in consultation with the U.S. EPA and California Environmental Protection Agency (CalEPA). The HHRA was prepared in accordance with U.S. EPA "Risk Assessment Guidance for Superfund: Human Health Evaluation Manual, Part A"; U.S. EPA's "Superfund Standard Default Exposure Factors for Central Tendency and Reasonable Maximum Exposure"; and other U.S. EPA and CalEPA guidance documents (PRC, 1996a). Refer to the PRC Parcel B RI Draft Final Report dated June 3, 1996 for additional information regarding investigation results and risk assessment findings. Based on the HHRA, current health risks are within a range that can be managed, and consequently the associated hazards are not significant. Under the Reasonable Maximum Exposure (RME), the Excess Lifetime Cancer Risk (ELCR) is less than 10^{-6} and the Hazard Index (HI) is less than 1 for current workers in the lease areas in Parcel B.

2.0 BACKGROUND

2.1 Hunters Point Shipyard History

Hunters Point has been documented since at least 1776 when the Mission San Francisco de Asis was founded. By 1849, the Hunter family was prominent and the name "Hunters Point" was established. Because of its geographical location, it became the center of maritime business. The first dry dock was completed there in 1876; additional dry docks were built at the turn of the century. Besides dry dock facilities, other maritime businesses existed in the vicinity of HPS including fishing and shrimping interests and other similar local enterprises. Over the years, successive owners continued the shipbuilding and maritime orientation of the property.

Because of concern that the United States would become involved in war, in 1940 the Navy received title to the land from a successor owner, Bethlehem Steel. Of the property acquired, only Dry Docks 2 and 3, two pump houses, a boiler house, a gate house, and a paint storage building remain. Significant construction occurred in successive years including the excavation of hillsides in Parcel A to fill portions of San Francisco Bay and construction of Dry Dock 4.

In 1946, what was eventually to be called the U.S. Naval Radiological Defense Laboratory originated at HPS. Today, all the buildings used by the U.S. Naval Radiological Defense Laboratory have been demolished, have been transferred to other

parties, or are no longer used for radiological purposes. By 1951, *HPS* shifted from operating as a general repair facility to specializing in submarines, although the Navy continued to operate *HPS* as a carrier overhaul and ship repair facility.

Recently, the Navy leased most of *HPS* to a private ship-repair company, Triple A Machine Shop Incorporated (Triple A). Triple A leased the property from May 1976 to June 1986. During this period, Triple A subleased portions of the property to other businesses. Some of these subleases are apparently still in effect. After the expiration of its lease, Triple A was involved in extensive litigation regarding disposal of hazardous wastes at the site.

Because of the presence of hazardous substances resulting from past historical operation at *HPS*, the U.S. EPA placed *HPS* on the National Priorities List in 1989 (Harding Lawson Associates [HLA], 1992).

In 1991, the DOD placed *HPS* on the Base Closure List, and the property was made available for non-defense use. *HPS* was designated as a "B" site by the Agency for Toxic Substances and Disease Registry in 1991, meaning that it poses no imminent threat to human health but has the potential to pose a long-term threat to human health.

Until April 1994, Hunters Point Naval Shipyard was an annex of Naval Station Treasure Island. Recently, the name Hunters Point Annex (HPA) has been changed to Hunters Point Shipyard (*HPS*) and *HPS* is currently under caretaker status by the EFA West (Navy, 1995a).

2.2 Current Status

As a means of organizing investigation, remediation, and closure; ***HPS*** has been divided into five geographic land parcels designated A through E (Navy, 1995a). The subject lease areas are currently leased and are within the *HPS* area defined as Parcel B.

Reports that describe the overall history, land use, soil and groundwater conditions, historical and cultural resources, and biological resources of *HPS* are listed in Section 6.0. EMCON Associates (EMCON) and HLA completed several investigations of soil and groundwater conditions at *HPS*. Recent investigations have been completed by PRC including; soil borings, soil and groundwater sampling, and well testing.

The most recent comprehensive summary is the Basewide Environmental Baseline Survey for the Hunters Point Annex (Navy, 1996b). The Draft Final Parcel B Site Inspection Report (HLA, 1994b) provides more specific information on concentrations of constituents detected in soil and groundwater. The Parcel B Remedial Investigation Draft Final Report (PRC, 1996b) provides current information reporting soil and groundwater conditions present at the lease areas. These and other documents report the results of the assessments and investigations completed to date including record reviews.

3.0 SITE CONDITIONS OF GROUP III BUILDINGS

3.1 Site Location and Access

The land area of *HPS* has been divided into five geographic land parcels (A through E) for the purpose of environmental investigations as described in the Base Realignment and Closure Cleanup Plan (Navy, 1994a). The Group III buildings of this SSEBS are more precisely defined as "lease areas", comprising four buildings and portions of their surrounding areas. These lease areas are located in the central, southern, and eastern sections of Parcel B. Figure 2 shows the location of the entire *HPS* and Figure 3 shows the Group III buildings. Buildings 114, 125, 128, and 134 and the surrounding areas are shown on Figures 4 through 7. Access to the Group III area is on paved streets from the main gate from Donahue Street to Lockwood Street. All of the lease area buildings are either adjacent to or accessible from Lockwood Street. Building 114 is on the south side of Lockwood Street. Building 125 is on the north side of Lockwood Street adjacent to Drydock 5. Building 128 is north of Lockwood Street near Berth 58. Building 134 is north of the intersection of Lockwood Street, Robinson Street, and Fisher Avenue.

3.2 Geology and Hydrogeology

Buildings 114, 125, 128, and 134 are located in Parcel B on a wedge of artificial fill overlying bay mud deposits and Franciscan Complex serpentinite, sandstone, and shale bedrock. The artificial fill is composed of clays, silts, sands, and gravels, covers approximately 95 percent of the ground surface, and was derived from excavation of former hills at *HPS* (PRC, 1994a). The former bay shoreline ran approximately 600 feet due south of Building 125 approximately 200 feet south of Building 128, and at the southern edges of Buildings 114 and 134 (PRC, 1994b). All of the lease area buildings are constructed on artificial fill deposited after 1935. Building 114 is located northeast of an outcrop formed by the excavation of the hillside during 1935 through 1975 infill operations at *HPS*.

The bedrock at Parcel B increases to a depth of 80 feet below ground surface (bgs) at the edge of San Francisco Bay in the north; decreasing in depth to the south and west (PRC, 1994a). The Franciscan Complex bedrock generally consists of serpentinite, sandstone, shale and lesser amounts of chert and greenstone. Between 1935 and 1975, the hillside on Parcel A was partially excavated and placed in San Francisco Bay which increased the land area of the *HPS* facility from less than 100 to over 500 acres. Consequently, the subsurface stratigraphy at Parcel B includes three artificial fill units: (1) serpentinite bedrock-derived fill consisting of gravel and boulder-sized material in a sand and/or clay matrix; (2) industrial fill; and (3) backfill material consisting of poorly graded sands and gravels. Generally, these fill materials overlay bay mud deposits, and to a lesser extent, undifferentiated sedimentary deposits (PRC, 1994b).

One soil boring completed to five feet bgs (EMCON, 1987b) between Building 114, and Building 134 and the fuel tank farm, indicated the shallow subsurface consisted of gravel fill underlain by clayey gravel fill. Two soil borings completed to five feet bgs (EMCON, 1987b) near Building 125 indicated the shallow subsurface consisted of silty clay, sand, sandy gravel, and gravel. One soil boring completed to five feet bgs (EMCON, 1987b) southwest of Building 128 indicated the shallow subsurface consisted of clayey to sandy gravel fill.

Hydrogeological investigations identified three aquifers at *HPS*; the A-aquifer, the B-aquifer, and the Bedrock aquifer. Parcel **A** is primarily underlain by the Bedrock aquifer while Parcel B is primarily underlain by the A-aquifer. Groundwater in the Bedrock aquifer generally flows outward from the topographically high Parcel **A** toward the low-lying areas and out to San Francisco Bay. On the south-facing cut slope of Parcel A, a few small seeps and springs are perennial, while on the northeastern slope a few intermittent seeps have developed in the Bedrock aquifer (PRC, 1994b).

The A-aquifer is the most thoroughly characterized and consists of saturated porous media such as fill materials and undifferentiated upper sand deposits overlying bay mud deposits. Groundwater in this aquifer ranges from 2 to 15 feet bgs. The A-aquifer is recharged by precipitation infiltration into the unpaved area (especially within Parcel E), bay water intrusion, and in some areas by leakage from storm drains and sanitary sewer systems (PRC, 1994b).

Groundwater flow in the A-aquifer at *HPS* is complex because the hydraulic properties of the subsurface fill materials are non-uniform and because of tidal influences, effects of storm drain and sanitary sewer systems, and variations in topography and drainage. Groundwater in the A-aquifer generally flows outward toward San Francisco Bay except where reversed by the influence of Pump Station A and along the shoreline where tidal influences are apparent. A relatively narrow horizontal zone (100 to 400 feet inland from the shoreline) of the A-aquifer is influenced by the fluctuations of tides in San Francisco Bay, especially in Parcel E. These tidal influences are less pronounced in Parcels B, C, and D because of construction along the shoreline (PRC, 1994b).

The A-aquifer and underlying B-aquifer are separated by bay mud deposits ranging from 5 to 60 feet thick under most of the low-lying areas of *HPS* (Parcels B through E). Clay and silt, which comprise the greatest portion of the bay mud deposits, act as a confining layer between the A- and B-aquifers. The B-aquifer consists of saturated and porous undifferentiated sedimentary deposits underlying bay mud deposits, and overlying the Franciscan Complex bedrock in the lower elevations of *HPS*. The B-aquifer is generally a confined, porous-media aquifer where groundwater is under pressure. The source of recharge of the B-aquifer is generally unknown, but the Bedrock aquifer and San Francisco Bay are likely contributors. Groundwater in the B-aquifer at *HPS* generally flows toward San Francisco Bay (PRC, 1994b).

3.3 Utilities

3.3.1 Storm Sewer System

The storm sewer system was constructed between 1942 and 1958 as a combined storm and sanitary sewer system. Storm sewer lines in the vicinity of the Group III buildings are shown in Appendix C. Information on the storm drain system, sewer system, and other utilities was primarily obtained from a survey conducted by YEI Engineers (YEI) in 1988. The sewer lines are built of concrete and vitrified clay pipes ranging in size from 8 to 72 inches in diameter. There are 8 major and 10 minor subsystems, each with its own tributary drainage area and San Francisco Bay outfall. In 1958, partial separation of the storm and sanitary systems began and in 1973, a major separation project was undertaken which resulted in the present storm drain and sanitary sewer system separation. **HLA** reported in 1994 that the storm and sanitary sewer systems were still interconnected at some locations. Based on the HLA report, the Navy investigated the reported cross-connections and where they actually existed were removed (Navy, personal communication).

About 90 percent of Parcels B through E are provided with storm sewers and drain by gravity into San Francisco Bay. Stormwater that collects in Parcel B is discharged to the bay from stormwater outlets at eight locations along the waterfront. The largest of these outlets serves 40 percent of Parcel B as well as nearly 50 percent of Parcel A. This outlet discharges into the bay adjacent to Building 144. A slightly smaller outlet serves 30 percent of Parcel B as well as 20 percent of Parcel A. This outlet discharges to the bay adjacent to Building 133. A third outlet serves 15 percent of Parcel B and discharges to San Francisco Bay adjacent to Building 159. The remaining 15 percent of Parcel B is served by five small outlets located at various points along the shoreline.

Six storm sewer sediment samples and four soil samples (one from each of four test pits) were collected from the storm sewers in Parcel B. Although many of the pipeline sediment samples have concentrations of aroclor-1260 and lead that exceeded health based levels (HBLs), soil sampling at pipeline breaks indicated that contaminants have not leaked to the surrounding soil and groundwater. Recommendations for additional work specific to Parcel B include the evaluation of the configuration of the storm sewer system at contaminated sites, the investigation of the potential for chemical releases, and the removal of contaminated sediment from the system. Further information about the condition of the storm drains in Parcel B is available in the Parcel B Site Inspection Report (**HLA**, 1994b).

The storm sewer lines were also included in the Site Investigation (SI) program as Site 50 (IR-50) because a potential for release of contaminants to the environment from the lines was believed to exist. Sediment samples collected during a stormwater investigation detected VOCs, SOCs, metals, PCBs, and petroleum hydrocarbons (**HLA**, 1994b). Workplans for removal actions in certain areas of the storm drain lines have been

formulated by PRC, and a contract has been awarded to IT Corporation to perform the work. The work is currently being performed and is scheduled to be completed in early 1997.

3.3.2 Sanitary Sewer System

The existing sanitary sewer system is a gravity sewer and pump station system and was originally part of the combined sanitary and storm drainage system built in the 1940s and 1950s. The sanitary sewer lines in the vicinity of the Group III Buildings are shown in Appendix C. Records reviewed during the Initial Assessment Survey (IAS) in 1984 reveal that substantial amounts of industrial waste flowed into the combined system during past operations at *HPS*. The wastes included acids, solvents, plating solutions, waste oil, paints, detergents, alcohol, decarbonizers, degreasers, and caustic solutions.

3.3.3 Steam Line System

The steam line system, constructed over four decades ago, spans the entire *HPS*. Steam line locations in the vicinity of the Group III Buildings are shown in Appendix C. The primary uses of the steam lines were to provide steam heat to selected buildings and ships docked at *HPS* and to warm fuel lines to facilitate fuel flow. Portions of the system were operational until as late as 1984; however the system is no longer in use. The system includes up to three types of pipes (steam lines, condensate return lines, and pump return lines) within a concrete trench measuring 3 feet wide by 4 feet deep. The steam lines were not operated for steam use during the period when Triple A occupied the site (1976 through 1986). However, it is suspected that Triple A utilized sections of the system to convey waste oil containing PCBs from the dry docks to oil reclamation ponds in Parcel E. The lines through which the oil was pumped appear to be only in those segments of the system that link these areas. The affected areas are within Parcels C (southeast corner of Dry Dock 4), D, and E and have been included in the IR program as Site 45 (SI-45); Parcel B is excluded from the areas affected.

3.3.4 Natural Gas

Historically, natural gas has been supplied to *HPS* from Pacific Gas and Electric Company (PG&E) at two service entrance locations, one along Crisp Avenue near Building 816 and one at the corner of Galvez and Donahue Streets. Subsequent to the Loma Prieta earthquake in October, 1989, the natural gas supply system to most of the facility has been inoperative. PG&E has installed slip liners in the Navy's system for Building 606 in Parcel D, and for Building 813 in Parcel A. No other facilities at *HPS* are currently serviced by natural gas.

The gas distribution piping system has required very few repairs according to base maintenance personnel. The Phase 2 Utility Technical Survey Non-Destructive Testing performed by Villalobos and Associates in November 1987 at seven gas pipeline sites indicated generally minimal pipe corrosion with numerous signs of breakdown of the coal tar coating. The HPS gas submeters and regulators appeared to be in good condition in most cases. All aboveground valves were visually checked and most appeared to be in fair condition.

Natural gas was used by only 27 of the 107 existing *HPS* facilities included in the YE1 study. The primary use was space heating of offices, shops, and restaurants. Additional gas consumers included cooking equipment, water heaters, industrial furnaces and ovens, and a boiler supplying process steam for Dry Dock 4. Overall system loads were considerably less than original design conditions for the base.

3.3.5 Water Supply System

Fresh water to *HPS* is supplied by the San Francisco Water Department via two water mains. Water line locations in the vicinity of the Group III buildings are shown in Appendix C. A 16-inch diameter main along Crisp Avenue provides the greater part of the freshwater needs of the shipyard, including the needs of ships berthed at the piers, wharves, or in dry dock. A smaller 8-inch diameter main along Jerrold Avenue provides for the water needs of the former housing area and administrative buildings located in Parcel A. The two water distribution systems are connected together through a closed 14-inch diameter pipe valve assembly at Galvez Avenue.

The 16-inch diameter water main runs parallel to Crisp Avenue and services the numerous buildings and yard facilities located adjacent to the street through a system of smaller branching water lines. The water distribution system is a combined service system; water for both fire protection and domestic usage is supplied from the common 16-inch diameter water main. Water service is supplied to Building 114 from the Lockwood Street main. Water lines run along the northwestern and southwestern walls of Building 125 (Navy, 1994b). The water service line runs along the northeastern wall of Building 128. The water service line runs underneath Building 134 in the fuel line corridor previously mentioned, and another water line runs northwest/southeast beneath Building 134.

Much of the freshwater piping is probably more than 50 years old and was installed when the shipyard was constructed. Sections of the piping have been replaced over time due to corrosion, leaks, or major breaks. Some sections have been replaced with nonmetallic pipes, notably polyvinyl chloride (PVC); sections of the shipyard freshwater system have been isolated due to recent pipe breaks. Nondestructive testing shows the majority of the piping to be in good condition, with some piping in the waterfront area in fair to poor condition due to external corrosion (Navy, 1994b).

In response to regulations of the Safe Drinking Water Act, a lead and copper water compliance program was implemented; initial sampling was conducted in December 1993. The sampling indicated that lead concentrations exceeded EPA health-based action levels, therefore, additional studies were performed including an evaluation of the system. Further work indicates that drinking water entering *HPS* did not contain significant amounts of lead or copper, and are below levels at which EPA recommends source water treatment. In addition, the study found that the water was slightly corrosive and that the lead detected at *HPS* was a corrosion byproduct. Submittal of the studies and appropriate reporting forms fulfilled current regulatory compliance requirements (RADIANT, 1995).

The occupants in Buildings 114, 125, and 134 use bottled water for drinking water although there are water line laterals which serve the buildings in the three lease areas; water is not used in Building 128. Bottled water consumption is not being monitored.

3.3.6 Electrical Power System

PG&E supplies electricity to *HPS*. The incoming electrical service consists of two 15 kilovolt (KV)-rated power lines, and the main electrical substation for the base originates from Substation AA on Parcel A. The condition of both electrical systems is reported to be good.

Electrical distribution lines with manholes are present in Lockwood Street with direct connections to Buildings 114 and 134. Additional subsurface electrical lines are northwest of Building 125 with a manhole north of the building, and lines are present on the southeast wall of Building 128 (Navy, 1994b). The subsurface system has been replaced, or supplemented with a pole-mounted system in 1990.

4.0 REVIEW OF EXISTING REPORTS

Pertinent reports describing previous investigations for the Group III area within Parcel B were obtained from the Navy Base Closure Team, Western Division, Naval Facilities Engineering Command, San Bruno, California. Section 6.0 presents the list of reports reviewed for this SSEBS. General descriptions and information for the area are included in the Navy's Baseline Environmental Report, Volume 1; Parcel A and Dry Dock 4, dated July 1994 (Navy, 1994a), Baseline Environmental Report, Volume 2a; Parcels B, C, D, and E, Hunters Point Annex, San Francisco, California, dated September 1994 (Navy, 1994b) and the Draft Basewide Environmental Baseline Survey Volumes I and II, Hunters Point Annex, San Francisco, California, dated February 28, 1996 (PRC, 1996a) and the Parcel B Remedial Investigation, Draft Final Report, Hunters Point Shipyard, San Francisco, California, dated June 3, 1996 (PRC, 1996b). For this SSEBS, the document review was limited to those listed, which were produced by the Navy and its consultants, and did not include additional review of primary sources such as title records, or aerial

photographs. The following sections summarize information from these reports particular to the Group III lease area buildings.

4.1 CERCLA-Related Subsurface Investigations

As part of the CERCLA cleanup process currently being implemented at the HPS, there have been areas identified within Parcel B that require investigation. The preliminary assessment (PA), which was conducted in 1989 and 1990, is the first step of the CERCLA process. The PA consists of documentation of potential environmental problems by conducting facility and regulatory agency file review of building sites and utility areas where possible chemical releases of hazardous substances to the environment may have occurred. Also included in the PA report are interviews with facility personnel and site visits. The second step of the CERCLA process is to conduct a site inspection (SI) designed to collect information on soil and groundwater contamination by conducting a limited sampling program. Following the SI, the significantly contaminated sites are declared IRP sites.

There are currently 16 installation restoration (IR) and 2 site inspection (SI) sites within Parcel B. There are currently three primary groundwater areas (plumes) designated B-1 through B-3, that contain significant chemical contamination within Parcel B. Plume B-1 is beneath the Buildings 114, 125, 128 and 134 lease areas (Navy, 1995). Presented below are descriptions of individual IR sites that are in or adjacent to the lease areas. **HLA** conducted a Parcel B field investigation and issued a site inspection report on April 15, 1994 (**HLA**, 1994b). A Parcel B Remedial Investigation (RI) Draft Final Report was submitted by PRC to the Navy on June 3, 1996. The Draft Parcel B Proposed Plan dated September 3, 1996 preferred alternatives for soil cleanup consist of excavation, onsite thermal desorption of DNAPL-, VOC-, SVOC-contaminated soil, and soil replacement; excavation, onsite thermal desorption and solidification/stabilization of inorganic and organic contaminated soil, and onsite placement; and excavation, solidification/stabilization of soil containing combined inorganics and organics, and onsite placement. The preferred alternative for groundwater cleanup is deed notification, source removal (as described in the above referenced soil cleanup alternatives), and groundwater monitoring. No groundwater remediation is planned at the present time.

4.1.1 IR-06: Tank Farm and Former Buildings 111 and 112

The IR-06 site is immediately adjacent to lease area Buildings 114 and 134. The site was used from 1942 until the Navy ceased active shipyard operations in 1974. Eighteen aboveground storage tanks (ASTs) formerly existed in this area, including diesel and lubrication oil tanks. Contaminants detected in the soil include VOCs, polynuclear aromatic hydrocarbons (PAHs), TPH, total oil and grease (TOG), PCBs, and metals including lead. Contaminants detected in the groundwater include benzene, toluene, ethylbenzene, and xylenes (BTEX), PAHs, TPHd, TOG, 1,2-dichloroethene(1,2-DCE),

trichloroethene (TCE), tetrachloroethene (PCE), vinyl chloride, and metals. Sufficient physical and chemical data have been collected to characterize the sources and extent of contamination at IR-06 such that the level of risk can be assessed. The data is sufficient for the development and screening of remedial alternatives in accordance with CERCLA guidance. Leaking ASTs and associated piping, asbestos, concrete, building debris, and soil were removed, and associated sumps were cleaned and backfilled in 1993. Shallow soil mixed with petroleum products and aroclor-1250 were remediated in early 1996. The following are remedial recommendations for IR-06; remove and treat the soil contaminated with organic compounds, metals, and petroleum compounds.

4.1.2 IR-10: Battery and Electroplating Shop (Building 123)

The IR-10 site is immediately adjacent to lease area Buildings 125, 128, and 134. The site was used for electroplating, and battery storage and maintenance from 1946 through 1974. Waste acids containing cyanide, chromates, and heavy metals were reportedly spilled on the floor and loading dock areas, and discharged into a floor drain system connected to a storm drain that discharged to San Francisco Bay. Contaminants identified at IR-10 include VOCs and metals. Contaminants identified in groundwater at the site include 1,2-DCE, TCE, and vinyl chloride. Sufficient physical and chemical data have been collected to characterize the sources and extent of contamination at IR-10 such that the level of risk can be assessed. The data is sufficient for the development and screening of remedial alternatives in accordance with CERCLA guidance. The following are recommendations for IR-10: remediate lead, petroleum hydrocarbon, and arsenic-affected soil.

4.1.3 IR-20: Rubber Shop (Building 156)

The IR-20 site is adjacent to the lease area Building 134 to the east. The site was used to fabricate rubber parts. Contaminants identified in the soils include PAHs, aroclor-1260, TPHg, TPHd, TOG, and metals including lead. Contaminants identified in groundwater include benzene, TPH-g, TOG, manganese, and arsenic. Recommendations for further work at IR-20 includes remediation of metals including lead-, and aroclor-1260-affected soil. Petroleum hydrocarbons in soil may require remediation. No further removal actions are planned.

4.1.4 IR-24: Buildings 124,125,128, and 130

The IR-24 site includes two lease areas, Buildings 125 and 128, and is adjacent to Building 134. Building 124 was used for acid mixing and contained aboveground storage tanks for sulfuric acid and electrolytes that were removed between 1979 and 1981. Contaminants identified in soil at IR-24 include VOCs, SOCs, TPH, PCBs, metals, asbestos, and PAHs. Specific contaminants identified in soil include metals, PCBs,

TPHg, and TCE. Specific contaminants identified in groundwater include TPHd, TPHg, TRPH, TOG, and lead. Recommendations for additional work at IR-24 include remediation of lead and other metals-affected soil, and remediation of aroclor-1260-affected surface soil. Petroleum hydrocarbons in soil may require remediation. Groundwater may require remediation for some or all of the above referenced contaminants. No further removal actions are currently planned.

4.1.5 IR-25: Building 134

The IR-25 site contains the Building 134 lease area and is within 300 feet of Buildings 114 and 128. Areas of concern in this building include a large concrete dip tank/degreasing vat labeled “chlorinated materials” built into the foundation, a sump that is partially inside and partially outside the building, areas of oil staining and corrosive damage, and a utility vault located on the exterior southwestern side of the building. Contaminants identified in soil and groundwater at IR-25 include PAHs, VOCs, SOCs, PCBs, TPH, and metals. Recommended remedial actions include removal and treatment of soil containing DNAPLs, and removal and treatment of groundwater containing DNAPLs. No previous removal actions have occurred, and no current removal actions are planned.

4.1.6 SI-31: Former Building 114

The SI-31 site is adjacent to lease area Building 114 (formerly 113A). The site was the former location of Building 114 which was demolished between 1990 and 1991. The site had an area previously covered with sandblast residue removed in 1994. Contaminants identified in the soils include PAHs and metals. No further work is recommended for this site and no removal actions have previously occurred or are currently planned.

4.1.7 IR-42: Buildings 109,113, and 114 (formerly 113A)

The IR-42 site includes Building 114 (formerly 113A) and is within 200 feet of Building 134. Areas of concern at Building 113 include floor drains, an identified “Radiation Area” where x-ray equipment is stored, an underground storage tank (UST) containing diesel oil on the western side of the building, and several locations where grease and chemical residue were observed in the building. Previous reports of the site indicated a sump; however, no sumps or indications of sumps were observed during the site inspections. Contaminants identified in soil at IR-42 include TOG, PAHs, PCBs, TPH, and metals. At Building 109, there is a possible buried oil water reservoir although a recently completed geophysical survey did not confirm the presence of a buried tank. No removal actions have previously occurred or are currently planned.

4.1.8 SI-45: Steam Lines

SI-45 is an installation-wide utility site consisting of a steam line system inside utilidor. Analyses of water samples collected at steam line access PA45ST202 (located at the northeastern corner of Building 130) indicate the presence of VOCs, PAHs, TPH, or TPHd, TPHg, total recoverable petroleum hydrocarbons (TRPH), and metals. Asbestos has been used as insulation covering steamlines (HLA, 1994b).

There are no steam lines in the vicinity of Building 114 (formerly 113A). The steam line access north of Building 125 (PA45ST201) was inspected and had no visible vault contamination, liquid in lines, or visible oil staining in lines; no samples were collected. However, there was tape around a damaged pipe shroud. A steam line is located north of Building 128, however the nearest access port to Building 128 (PA45ST209) was not sampled. The steam line is outside the west, north, and east walls of Building 134, as well as underneath the building in the fuel line corridor. There are three access ports for the steam line along this corridor, however none were sampled. To prevent VOCs and petroleum hydrocarbons from the steam line system to soil and groundwater, the steam line system and entrapped waters are included in a proposed removal action (PRC, 1996).

4.1.9 IR-46: Fuel Lines

IR-46 is an installation-wide utility site consisting of fuel lines. **An** underground fuel pipeline is located approximately 150 feet south of the Building 114 lease area and originates from the former fuel tank farm IR-06. At sampling location PA46TA02, the following analytes were identified: tetrachloroethane, PAHs, benzo(a)pyrene, aroclor-1260, TPH, TRPH, lead, antimony, copper, and zinc. The fuel line from the former fuel tank farm to Berths 57 and 56 is located near the eastern corner of Building 128. Soil samples taken near Building 128 contained the following analytes: xylenes, carbon disulfide, PAHs, TPHd, TPHg, aroclor-1260, TOG, lead, toluene, ethylbenzene, benzo(a)anthracene, chrysene, benzo(k)fluoranthene, benzo(a)pyrene, and **bis(2ethylhexyl)phthalate**. TPHd, TPHmo, TPHg, and TRPH have been detected in groundwater samples. The fuel line utility corridor passes directly under Building 134 from the former fuel tank farm to the ship berths. Further work includes drilling and sampling of soil borings at specific locations to investigate subsurface conditions. Remediation of petroleum hydrocarbons in soil may be required. Currently, the fuel distribution lines are not in use. The fuel distribution lines are proposed to be excavated and removed during the remedial action.

4.1.10 IR-50: Storm Sewer and Sanitary Sewer Systems

IR-50 is an installation-wide utility site consisting of storm drains and sanitary sewer lines. The stormwater system runs below Lockwood Street. Sediments in the storm drains contain metals, PCBs, and petroleum hydrocarbons. Catch basin effluent (PA50CB200) located north of Building 113 and downgradient from Building 114 contained the following constituents; PCE, aroclor-1260, TPHd, TRPH, and metals. The stormwater system is located along the southeastern wall of Building 125. The storm drain effluent was sampled downstream of Building 125 (PA50SW201), and contained aroclor-1260, TPHd, TRPH, and metals. Stormwater from Building 128 flows directly to the bay. Stormwater from Building 134 flows southerly under Building 134 from the direction of the former fuel tank farm in the same utility trench as the fuel lines. The effluent from the storm drain at the manhole upstream from Building 134 (PA50TA06) contained diesel, TPH, and PAHs. The effluent from the storm drain downstream from Building 134 (PA50FC212), contained aroclor-1260, TPHd, TRPH, lead, and zinc.

The PRC Base Closure Plan (Navy, 1995a) identified a discharge source at Building 114 as "two floor drains". The two floor drain connections within the building are undetermined. The potential hazardous substances is sulfur. The recommended remedial action is to perform dye tests to determine the floor drain connection configuration. Building 113 is reported to have stained concrete, a pitted and stained area next to the sink, and cracks in the concrete (HLA, 1994b). One sanitary sewer line in the vicinity of Building 114 is located near the southeastern corner of Building 114.

There are sewer lines outside the four sides of Building 125, and the main line is on the southeastern wall. The sanitary sewer effluent from manhole sample PA50SN206 was tested; toluene, barium, calcium, iron, magnesium, manganese, potassium, and sodium were detected (PRC, 1994b). The sanitary sewer line passes along the northwestern wall of Building 125. Sanitary sewer manhole sample PA50SN206 contained VOCs and metals.

Building 128 is not shown on the map as being serviced by a sanitary sewer line (although there is a bathroom in this building). Building 134 has sewer lines along the northern and western wall that discharge into the main line in Lockwood Street. Manhole PA50SN228 is located directly north of Building 134; sewer water was not sampled in the vicinity of Building 134. An interim action is planned that covers the active storm drain system including portions of Parcel B, with work anticipated in late 1996. Additional work includes clean-out and disposal of storm drain sediments which is currently being performed and scheduled to be completed in early 1997, seal line leaks to prevent infiltration of chemically-affected groundwater, and repair or replacement of Parcel B lines underneath IR-07, IR-10, and IR-25 (PRC, 1996).

4.1.11 IR-51: Former Transformer Locations

IR-51 is an installation-wide site consisting of former transformer locations. Building 114 is listed as having an active transformer located outside; no staining was observed (HLA, 1994b). Aroclor-1260 has been identified at IR-51 sampling site PA5 1SS04 located at the south wall of Building 114. Aroclor-1242 has been identified at PA5 1SS01 located at the transformer station fifty feet north of Building 125. Aroclor-1260 has been identified at two sampling locations (PA5 1SS03 and PA5 1SS02) in the Building 128 transformer room. Further work includes exploratory excavation near the two transformers at Building 128, and possible further work at other Parcel B former transformer sites. Remediation of petroleum hydrocarbon-affected soil may also be required. No previous removal actions have occurred and none are currently planned.

4.2 Asbestos

In accordance with DOD policy regarding ACM, the Navy is taking the following steps at *HPS* to manage ACM in a manner protective of human health and the environment, and to comply with applicable federal, state, and local laws and regulations governing ACM hazards: (1) conducting a ACM survey and documenting the existence, extent, and condition of ACM in a report, (2) preparing the Operations and Maintenance (O and M) Plan, (3) abating the ACM at the time of survey if it poses an immediate threat to human health, (4) programming funds for ACM abatement based on the recommendation in the survey report and abating damaged, friable and accessible ACM, (5) providing occupant notification of ACM on the lease area.

The Navy surveyed all buildings at *HPS* for ACM in 1994. Buildings 114, 125, 128, and 134 contain friable ACM and are scheduled for ACM abatement in 1996. ACM abatement has been completed at Buildings 128 and 114. The ACM abatement has been completed at Building 134 but final inspection has not been completed. ACM abatement has not been started in Building 125 but is scheduled to occur in December 1996. The lease area occupants will be notified to implement an O and M Plan. The O and M Plan includes the following 7 elements: notification, surveillance, controls, work practices, recordkeeping, worker protection, and training defined as follows; (1) Notification - notify workers and building occupants of ACM locations and the procedures for ACM area avoidance, (2) Surveillance - perform regular surveillance of ACM to note, assess, and document changes in condition, (3) Controls - follow work control/permit systems to control activities that may disturb ACM, (4) Work Practices - follow established work practices to avoid or minimize asbestos fiber release during activities affecting ACM, (5) Recordkeeping - document all O and M activities, (6) Worker Protection - follow OSHA required medical and respiratory programs, (7) Training - personnel involved with ACM management and maintenance workers shall be trained per EPA regulations in an accredited course.

5.0 SITE CONDITIONS OF LEASE AREAS

5.1 Building 114

5.1.1 Lease Area

The lease area is described as the complete area of Building 114 and the complete outdoor area within 10 feet of the building. Apparent discrepancies have been found in several reports regarding the building number and description. A former building designated as 114 previously existed at **HPS** in Parcel B but has since been demolished. The building previously designated as 113A was changed to Building 114, and is currently leased under the 114 designation. For the purposes of this report, the former Building 113A is designated as Building 114. The building is currently leased and is being used for the testing of soils, concrete, and windows for their physical properties, and for storing equipment for field testing of materials. The current lessee is the Smith-Emery Company.

5.1.2 Site Reconnaissance and Background

On November 22, 1995, a field reconnaissance was conducted to document the current condition of the lease area with regard to the potential presence of hazardous substances. The following is a summary of the building's history and of observations made during the visit. Photographs were taken at the time of the field visit and are available upon request.

According to the building profile (Appendix B), no date is provided for construction of Building 114. Building 114 shares a common wall with Building 113. Building 114 is a one-story, wood-framed structure with an area of 4,000 square feet, see Figure 4. There were four trailers utilized as offices located between the building and Lockwood Street. According to information supplied by the occupant, the trailers have been approved by the Navy for commercial use. A building entrance was located at the northeastern wall of the building towards Lockwood Street. A rear entrance was located in the southwestern wall of the building. Based on visual inspection, Building 114 was being used as a concrete, soil, and window testing facility.

Building 114 was previously used by the Navy as a tug and submarine maintenance shop (also machine shop, torpedo maintenance shop, and electrical substation) and a Q&RA non-destructive test facility until 1974 when the Navy ceased active shipyard operations at **HPS** (PRC, 1994a). There was an adjacent electrical substation referred to either as Substation S or Substation 5, according to available information. Navy shop operations were listed as unknown. Waste materials from the shop operations included metal equipment scrap generated at an unknown rate and disposed of in an onsite scrap yard or landfill. Building 114 is listed as part of IR-42, a radiation site (Navy, 1995a). A report

issued by the Naval Nuclear Power Unit, Port Hueneme, California, dated October 12, 1979 indicated that results from a radiation survey conducted by a RASO survey team were "less than detectable activity", i.e., below levels that could be detected by the equipment used at that time. When possible and where indicated, the survey technique included removing carpeting, tiles and plywood to expose the surface in use during the period of active operations involving radioactive material. Based on these results, it was concluded that the risk due to radiological concerns does not exist. According to Mr. Don Brown, (HLA, 1994a), radioactive material was used in this building where X-rays were taken and developed. Building 114 was listed in the 1994 Baseline Environmental Report as being leased during Triple A operations to Golden Gate Heat Treating Company (Navy, 1994b).

Building 114 has been leased by Smith-Emery since 1978 to test soils, asphalt, steel, concrete, and windows for various physical properties. Materials and equipment used included sulfur compounds, clay, sand, hydrochloric acid, Basolit, Magnaflur, propane, gasoline, lubricants, concrete, kerosene, 1, 1, 1-trichloroethane (1, 1, 1-TCA), and soil testing equipment including soil density gauges (radioactive source) (HLA, 1994b). However, discussion with Smith-Emery personnel indicated they do not handle or test contaminated soil. Used materials generated by lease area operations include waste metal produced at an unknown rate that were sent to a recycler (HLA, 1994b). Less than 10 gallons of liquid solvent waste are generated per year and are transported offsite for disposal.

According to a previous report, the building had a concrete floor, several offices, storage rooms, a concrete sample curing room, a steam room, a saw, and hydraulic presses; crawl spaces were not observed (HLA, 1994b). The public areas of the building were generally in fair repair with poor housekeeping practices. However, spills on and in the vicinity of floor drains indicated that some disposal of liquids may have occurred in the past; fresh spillage was not observed.

The majority of the spaces inspected were used for materials testing, with the trailers used as offices. Hazardous substances previously mentioned, excepting the radioactive soil, were observed within the building to the rear of the building in a shed and in the locked containers; no hazardous soil was observed. Notices regarding the storage and disposal of hazardous substances were not posted. Fire extinguishers were observed within the building.

The asphalt area southwest of the building contained scrap metal, equipment, and materials storage. The majority of the area surrounding Building 114 was paved with asphalt in good condition. A scavenger box was present to the rear of the building filled with concrete cores as described in Section 5.1.9. Vegetation was observed growing in cracks in the pavement and along the utilidors. No staining or chemical odors were noticed outside the building in the lease area.

A locked metal shipping container was located immediately south of Building 114 and was used to store soil density testing gauges. These gauges are used to test in-place

density and moisture content of compacted fill material at construction sites. The gauges contain small radiation sources. The lessee maintains required records and monitors radiation levels in the shipping containers; radioactive material is enclosed within the gauges.

5.1.3 Asbestos

Asbestos-containing material identified in Building 114 during a 1994 survey included friable and nonfriable thermal system insulation (TSI). Pipe lagging was observed in the building during the site visit; accessible ACM was either nonfriable or in good condition. ACM identified included:

- TSI
- Roofing
- Cinder block
- Mastic
- Floor tile
- Grout
- Transite

5.1.4 Polychlorinated Biphenyls (PCBs)

There are no PCB-containing transformers in the Building 114 lease area. Building 114 has an electrical substation which has been previously referred to in other documents as either Substation S or Substation 5. In other references, two PCB-containing transformers labeled 6945048 and 3267108 were reported in the vicinity of Building 113, approximately 25 feet from the Building 114 lease area. Both transformers apparently previously leaked but there was no associated staining. No PCBs were detected from a sample collected at Building 113. Both transformers have been removed; no further work was recommended.

5.1.5 Storage Tank System

The records review and site inspection were designed, in part, to ascertain whether underground or aboveground tank systems have been or are present in the lease area. No underground or aboveground tanks have been identified (or observed) within the lease area.

5.1.6 Oil/Water Separators or other Sumps

Building 114 is listed on selected previous reports as having no drains or sumps, however, subsequent reports and visual site inspections referenced indicated the presence of floor drains. No sumps or oil/water separators were observed or noted during review of available documents.

5.1.7 Wastewater Treatment and Disposal

Based on site utility maps (Appendix C) and observations during the field visit, wastewater from the lease area is apparently discharged to the sanitary system at HPS (HLA, 1994a). In addition, the sanitary sewer from the former fuel tank farm area drains towards the eastern corner of Building 114 into the Lockwood Street main line. Restrooms and areas containing sinks are potential discharge points. Notices have not been posted at these locations by the lessee to indicate the proper disposal of hazardous substances.

5.1.8 Air

There was no information to indicate that air permits have existed for Building 114. Vapor hoods for venting fumes generated from asphalt extraction processing with 1,1,1-TCA were noted.

5.1.9 Solid Waste Disposal, Landfills, Ponds

None of the available information indicates that the lease area has ever been used for disposal of solid waste in either landfills or ponds (active or inactive). The occupant generates concrete cores (approximately 6 inches in diameter and 12 inches in length) that were observed throughout the ~~HPS~~ in use as retaining walls. A dumpster at the rear of Building 114 was used to temporarily store the concrete cores prior to disposal at a landfill.

5.1.10 Releases of Hazardous Substances to Soil or Groundwater

Based on historic use of the building, the lease area has been included in the ~~IRP~~ as IR-42. Contaminants identified in soils include metals, PAHs, and PCBs. Recommended work for IR-42 includes possible remediation of petroleum hydrocarbon affected soil, and remediation of lead/arsenic and aroclor-1260 affected soil. Previous findings are included in the HLA Parcel B Site Inspection Report, dated April, 1994 (HLA, 1994b),

and current findings are included in the PRC Parcel B RI Draft Final Report dated June 3, 1996. See Appendix A for sampling location details.

5.1.11 Specific Hazardous Substances or Potential Materials of Concern

None of the available information indicated that the following are potential materials of concern within the lease area:

- Medical or biohazard wastes
- Ordnance
- Pesticides
- Radon (High radon concentrations would not be expected for the geologic and environmental setting at **HPS** .)

The following hazardous substances have been identified within the lease area:

- Asbestos: **A** survey for ACM was conducted by the Mare Island Naval Shipyard in August 1984. Damaged and fixable asbestos was identified. The survey recommended remediation of certain, specifically identified ACM, and also that an appropriate **O** and **M** Plan be established to control the asbestos that remains. Remediation of the identified ACM has been completed.
- Radioactive sources
- Hazardous substances associated with occupant use of the building
- Lead-based paint: Based on the age and construction of Building 114, lead-based paint may be present. The lessee will be responsible for managing all LBP and potential LBP in compliance with all applicable laws and regulations

5.1.12 Adjacent Properties

A former fuel tank farm located immediately adjacent east of the lease area was the site of a confirmed fuel release and is included in IR-06, see Section 4.1.1. Building 113, which adjoins Building 114, was used by the Navy as a salvage diver's shop where waste metal equipment was generated at a rate of 1,000 pounds per week. IR-10 is located north across Lockwood Street, see Section 4.1.2. Building 114 is located to the east, and is part of SI-31, see Section 4.1.6. IR-24 and IR-25 are located across the street and are found in Sections 4.1.4 and 4.1.5, respectively. Further work including remediation of affected areas is recommended for some of the adjacent IR sites. See the PRC Parcel B Remedial Investigation Draft Final Report dated June 3, 1996 for additional information. See Appendix A for sampling locations.

5.1.13 Summary

5.1.13.1 Contents

This section presents a summary of the significant findings, the environmental risks, and the recommendations and conclusions of the study. The lease area has been determined to be suitable for leasing provided the restrictions identified in this report are implemented.

5.1.13.2 Environmental Condition of Property

The Final Basewide Environmental Baseline Survey (EBS) (PRC, 1996a) indicated that the Environmental Condition of Property for the lease area is a Category **6**. A Category 6 designation indicates storage, release, disposal, and/or migration has occurred but required response actions have not occurred. The Base Closure Team determined the Environmental Condition of Property Category after review of the EBS.

5.1.13.3 Significant Findings

The SSEBS results indicate that hazardous substances are present in the lease area and currently are being used. No releases associated with current use were observed within the lease area. It is our understanding that continuing investigations are being performed within the lease area.

On the basis of our review of the information obtained from the references listed in Section 6.0 and from field observations, we have identified the following sources and potential sources of hazardous substances at the lease area:

- ACM: Implementation of an O and M Plan is recommended.
- Hazardous substances used by the occupants: As described in Section 5.1.2, the occupants at Building 114 use hazardous substances in their business.

Due to previous Navy activities, investigation and characterization of the soil and groundwater quality within the vicinity of the lease area will be continued to determine if additional areawide investigation and/or remediation of soil and groundwater will be necessary.

5.1.13.4 Analysis of Environmental Risks for the Lease Area

Risk analysis includes the evaluation of contaminant sources and characteristics, pathways and potential receptors. The currently available data for the Building 114 lease area is not adequate to permit a complete characterization either of the nature and extent of contaminants or of all potential risks. This review is limited to the lease area. For the anticipated uses of the lease area, the principal pathways of concern include:

- Inhalation of asbestos fibers
- Inhalation, ingestion, and dermal contact created by the use of hazardous substances in performance of work by the occupants
- Inhalation, ingestion, and dermal contact with soil or dust
- Ingestion, and/or dermal contact with groundwater
- Radiation exposure through use of soil testing gauges
- Inhalation and Ingestion of lead-based materials

Contaminated soil is present near the lease area but is not generally subject to transport since occupant activities are not expected to result in soil disturbance. Groundwater at the lease area is not accessible at the surface.

Based on the HHRA, current health risks are within a range that can be managed, and consequently the associated hazards are not significant. Under the Reasonable Maximum Exposure (RME) the Excess Lifetime Cancer Risk (ELCR) is less than 10^{-6} and the Hazard Index (HI) is less than 1 for current workers at the lease areas in Parcel B (PRC 1996, Feasibility Study, Volume II, Section 5.2.1).

The potential risks at the lease area can be managed through administrative and procedural controls, and management and monitoring that limit or prevent the exposure of workers to hazardous substances. Administrative controls include deed restrictions as referenced in the FOSL; and source controls include soil removal among others, as referenced in Section 4.1. Access to and exposure to any identified hazardous substances within the lease area, therefore, will be controlled administratively by physical restrictions and by notification of all concerned parties to manage exposure of the lessee or occupants. This evaluation pertains to current usage and does not include considerations resulting from altered future usage.

5.1.13.5 Recommendations and Conclusions

The prospective occupant should be made aware of this report and of the fact that continued access for investigations will be required. Occupant access to the lease area is limited as defined by the Navy in the lease agreement; and use of the buildings for light industry appears consistent with limited access. The occupants must comply with all applicable local, state, and federal regulations regarding the use, storage, and disposal of

hazardous substances. The occupants are responsible for obtaining all necessary permits and licenses for their specific operations.

5.2 Building 125

5.2.1 Lease Area

The lease area is described as the complete area of Building 125 and the complete outdoor area within 10 feet of the building. The building is currently leased and being used by several artisans, a cabinet maker, sculptor, photographer, and for offices. The current lessee is Tad Bridenthal, a cabinetmaker.

5.2.2 Site Reconnaissance and Background

On December 12, 1995, a field reconnaissance was conducted to document the current condition of the lease area with regard to the potential presence of hazardous substances. The following is a summary of the building's history and of observations made during the visit. Photographs were taken at the time of the field visit and are available upon request.

According to the building profile (Appendix B) Building 125 was constructed in 1944. The building is a one and two-story wood-framed structure with an area of 10,416 square feet, see Figure 5. Building 125 was used by the Navy as the submarine cafeteria until 1974 when the Navy ceased active shipyard operations at **HPS**. No hazardous chemicals were identified in use at Building 125 during the Navy tenure. Effluent material was apparently disposed into the combined storm and sewer system. There was a grease trap present that is discussed in Section 5.2.6. According to the current lessee employees, the building was vacant before being leased by Kimberly Vinegar, followed by Bridenthal Cabinetry. The building has been subsequently subleased for artisan studios and accounting offices.

The public areas of the building were generally in good repair with good housekeeping practices. Sinks in the restrooms were not posted with any notices regarding proper disposal of hazardous substances.

All of subleased areas were inspected to obtain information on the general condition of the spaces and handling of hazardous substances. The majority of the subleased spaces inspected were used as artisan studios and accounting offices. The housekeeping condition of the areas inspected was uniformly good to excellent. Hazardous substances were observed in the main downstairs area and included photographic supplies, spray painting supplies, and woodworking and sculpting chemicals including paint, varnish, resin, and glue.

There were eighteen rooms on the first floor, and five rooms on the second floor connected by an internal stairway. The five rooms on the second floor were used for accounting offices, and men/women restrooms. The main entrance to the building was through a rollup door on the western wall of the building. The rollup door served as a foyer to the artisan studios. Adjacent to the door was a former walk-in food refrigeration locker which was not accessible. The largest room in the building was a combination cabinet shop/sculpting studio/art studio. There was a utility closet in the southern building wall that contained several small compressors. Pipe lagging ACM has been taped and painted to signify that the material contains asbestos fibers. Fluorescent lighting was used throughout the building. There is a shallow floor depression that was apparently a previous oven/stove location, and an exhaust hood was present. In the adjacent room, the exhaust hood ducting was connected to an air blower. The floor drains were clean and dry.

On the first floor there was a photo-developing room, a recording studio, a spray painting area, and two storage rooms containing art work in boxes, wine bottles, paintings, and furniture. In one storage room were three metal storage lockers labeled "flammable materials storage" which were locked; there were also men/women restrooms.

There were no notices indicating the proper storage and disposal of hazardous and non-hazardous substances. Fire extinguishers were observed in the main studio. Piped water was available in the building for washing but bottled water was used for drinking.

The majority of the area surrounding Building 125 was paved with asphalt in generally good condition; limited patching was observed. A raised concrete footing with a metal plate on the northeastern building side was possibly a utility vault. Utilidors were evident east and northwest of the building. A small propane tank was observed outside the building. There was peeling paint on the building exterior and in the vacant areas of the building interior. No staining, chemical odors, or distressed vegetation was noticed outside the building.

5.2.3 Asbestos

There are seven homogeneous areas assumed to contain ACM, and nine confirmed ACM homogeneous areas identified in Building 125 during a 1994 survey. The asbestos included:

- TSI
- Roofing
- Grout
- Floor tile
- Sheet flooring
- Transite
- Magnesite floor covering

5.2.4 Polychlorinated Biphenyls (PCBs)

There was a transformer pad enclosed within a chain link fence 25 feet northeast of Building 125. Transformers 385689 and 385747 (non-PCB containing) apparently did not leak and have not been removed. Transformer PCV8539-15 had oil containing PCBs (no reported leaks or stains) and was removed on October 15, 1987 (Navy, 1994b). Sample PA518801 was collected near the transformer pad located 25 feet northeast of Building 125; aroclor-1242 was detected and an additional sample (PA24MW01A) was collected between Building 125 and the transformer pad; no aroclor was detected. No further work was recommended (HLA, 1994b).

5.2.5 Storage Tank System

The records review and site inspection were designed, in part, to ascertain whether underground or aboveground tank systems have been or are present in the lease area. No underground or aboveground tanks have been identified or observed within the lease area.

5.2.6 Oil/Water Separators or other Sumps

A grease trap used for cafeteria effluent was located approximately 20 feet from the northwestern side of the building. Soil samples were taken adjacent to this sump. No other oil/water separators were observed or noted in our review of available documents. See Section 5.2.10 for more information on soil sample results (HLA, 1994b).

5.2.7 Wastewater Treatment and Disposal

Based on site utility maps (Appendix C) and observations during the field visit, wastewater from the lease area is apparently discharged to the sanitary system at *HPS* (Navy, 1995b). The Navy discharged liquid generated during food preparation processes into the sanitary system. Restrooms and kitchen areas containing sinks are potential discharge points; no notices regarding proper disposal were observed.

5.2.8 Air

There was no information to indicate that air permits have existed for Building 125.

5.2.9 Solid Waste Disposal, Landfills, Ponds

None of the available information indicated that the lease area has ever been used for disposal of solid waste in either landfills or ponds (active or inactive).

5.2.10 Releases of Hazardous Substances to Soil or Groundwater

Based on historic use of the building, the lease area has been included in the IRP as part of the IR-24 investigation. Soil Boring PA24B001 was completed near the grease trap 20 feet west of Building 125; detected substances included TOG, carbon disulfide, and 4-methyl-2-pentanone. A sample from Monitoring Well PA24MW01A, located 25 feet southwest of the fenced transformer area (north of Building 125), contained TPH, xylenes, lead, and cadmium (HLA, 1994b). Soil contamination was apparently limited to the Building 123 and Building 128 utilidor locations; no further work was recommended for the lease area as part of IR-24. Findings are included in the HLA Parcel B Site Inspection Report, dated April 15, 1994 (HLA, 1994b) and the PRC Parcel B Remedial Investigation Draft Final Report, dated June 3, 1996 (PRC, 1996b). See Appendix A for sampling location details.

5.2.1.1 Specific Hazardous Substances or Potential Materials of Concern

None of the available information indicated that the following are potential materials of concern within the lease area:

- Medical or biohazard wastes
- Ordnance
- Radioactive and/or mixed wastes
- Pesticides
- Radon (High radon concentrations would not be expected for the geologic and environmental setting at HPS.)

The following hazardous substances have been identified within the lease area:

- Asbestos: A survey for ACM was conducted by the Mare Island Naval Shipyard in August 1994. Damaged and friable asbestos was identified. The survey recommended remediation of certain, specifically identified ACM, and also the implementation of an appropriate O and M Plan to control the remaining ACM.
- Hazardous substances associated with the use of the building by the occupants.

- Lead-based paint: Based on the age and construction of the structure, lead-based paint may be present. The lessee will be responsible for all LBP and potential LBP in compliance with all applicable laws and regulations

5.2.12 Adjacent Properties

Hazardous substances have been detected on adjacent properties (Building 128 is located east) during the IRP as part of the IR-24 investigation; refer to Section 4.1.4 for more information. IR-10 is located to the south; see Section 4.1.2. Recommended further work for adjacent IR sites includes remediation of metals and aroclor-1260 affected soil, and possible remediation of petroleum hydrocarbon affected soil. See Appendix A for sampling location details.

5.2.13 Summary

5.2.13.1 Contents

This section presents a summary of the significant findings, the environmental risks, and the recommendations and conclusions of the study. The lease area has been determined to be suitable for leasing provided the restrictions identified in this report are implemented.

5.2.13.2 Environmental Condition of Property

The Final EBS (PRC, 1996a) indicated that the Environmental Condition of Property for the lease area is a Category 6. A Category 6 designation indicates storage, release, disposal, and/or migration has occurred but required response actions have not occurred. The Base Closure Team determined the Environmental Condition of Property Category after review of the EBS.

5.2.13.3 Significant Findings

Hazardous substances are present in the lease area and are currently being used; no releases were observed. It is our understanding that no continuing investigations are being performed in the Building 125 lease area.

On the basis of our review of the information obtained from the references listed in Section 6.0 and from field observations, we have identified the following sources and potential sources of hazardous substances at the lease area:

- ACM: Limited remediation and implementation of an O and M Plan is recommended
- PCBs from a transformer station
- A grease trap has been identified with previous chemical release
- Hazardous substances used by the occupants: As described in Section 5.2.2, the occupants at Building 125 use hazardous substances for their business.

Due to previous Navy activities, investigation and characterization of the soil and groundwater quality within the vicinity of the lease area will be continued to determine if additional areawide investigation and/or remediation of soil and groundwater will be necessary.

5.2.13.4 Analysis of Environmental Risks for the Lease Area

Risk analysis includes the evaluation of contaminant sources and characteristics, pathways and potential receptors. The currently available data for the Building 125 lease area is not adequate to permit a complete characterization either of the nature and extent of contaminants or of all potential risks. This review is limited to the lease area. For the anticipated uses of the lease area, the principal pathways of concern include:

- Inhalation of asbestos fibers
- Inhalation, ingestion, and dermal contact created by the use of hazardous substances in performance of work by the occupants
- Inhalation, ingestion, and dermal contact with soil or dust
- Inhalation or ingestion of lead-based materials
- Inhalation, and/or dermal contact with groundwater

Contaminated soil is present at or near the lease area but is not generally subject to transport since occupant activities are not expected to cause soil disturbance. Groundwater at the lease area is not accessible at the surface.

Based on the HHRA, current health risks are within a range that can be managed, and consequently the associated hazards are not significant. Under the Reasonable Maximum Exposure (RME), the Excess Lifetime Cancer Risk (ELCR) is less than 10^{-6} and the Hazard Index (HI) is less than 1 for current workers at the lease areas in Parcel B (PRC 1996, Parcel B Feasibility Study, Volume II, Section 5.2.1).

The potential risks at the lease area can be managed through administrative and procedural controls, and management and monitoring, that limit or prevent the exposure of workers to hazardous substances. Administrative controls include deed restrictions as referenced in the FOSL; and source controls include soil removal among others, as referenced in Section 4.1. Access to and exposure to any identified hazardous substances within the lease area, therefore, will be controlled administratively by physical restrictions and by notification of all concerned parties to reduce exposure of the lessees

or occupants. This evaluation only pertains to current usage and does not include considerations resulting from altered future usage.

5.2.13.5 Recommendations and Conclusions

The prospective occupant should be made aware of this report and of the fact that continued access for investigations will be required. Occupant access to the lease area is limited as defined by the Navy in the lease agreement, and use of the buildings for commercial purposes appears consistent with limited access. The occupants must comply with all applicable local, state, and federal regulations regarding the use, storage and disposal of hazardous substances. The occupants are responsible for obtaining all necessary permits and licenses for their specific operations.

5.3 Building 128

5.3.1 Lease Area

The lease area is described as the complete area of Building 128 and the complete outdoor area within 10 feet of the building. The building is currently leased and being used as a warehouse for storage of automobiles, motorcycles, boats, backhoe, furniture, and antique fire engines, and as a boat construction shop. The lessee is the City and County of San Francisco.

5.3.2 Site Reconnaissance and Background

On December 12, 1995, a field reconnaissance was conducted to document the current condition of the lease area with regard to the potential presence of hazardous substances. The following is a summary of the building's history and of observations made during the visit. Photographs were taken during the field visit and are available upon request.

According to the building profile (Appendix B) Building 128 was constructed in 1944. Building 128 is a one-story, wood-framed building with an area of 24,120 square feet, see Figure 6. Building 128 was used by the Navy as a shop services and work control center (machine shop), and electrical Substation "U" until 1974 when the Navy ceased shipyard operations. Materials used by the Navy at Building 128 are unknown; the wastes generated were oil, solvents, corrosives, and hydrocarbons. The amount and disposition of the wastes generated is unknown. During the Triple A lease period from 1974 to 1986, the building was used for boat storage.

Building 128 has been formerly occupied by Miller Pipeline Company (two shops in the southeastern portion of the building) and reportedly by the Federal Drug Enforcement Agency (DEA) (northwestern portion of the building used for vehicle impoundment)

since 1992. The inventoried chemicals at that time were oil, solvents, corrosives, and hydrocarbons contained in 1 55-gallon drum (oil), 2 55-gallon drums (waste oil), and 2 55-gallon drums (oil residue) (HLA, 1992).

In 1994, Building 128 occupants were listed as the San Francisco Police Department (SFPD) and Miller Pipeline Company, and the use at that time was as an automobile shop. This building was listed as having previously been used as a machine shop and is currently being used as a storage area with electrical transformers present (Navy, 1995a). No chemicals or wastes were identified during the site investigation in 1994 (Navy, 1994b).

The field reconnaissance indicated that the public areas of the building were generally in good repair, with good housekeeping practices. Currently, the building is only used by the SFPD for vehicle impoundment, and based on visual inspection, the entire portion of the building was previously used for vehicle maintenance.

The entire floor was concrete with no basement or crawl spaces although there were two utility vaults. One vault was under the floor parallel to the northeastern wall of the building and had several 2 ft. x 3 ft. access points which were covered with wooden planks; the other vault was partially covered by a backhoe bucket. Adjacent to one plank cover were three severed wire cables (1-inch diameter). There was a vehicle wash area containing a drain; the subsurface drain destination (storm or sanitary sewer) was unknown.

The building had one central room with attached wings and interior partition walls. There was an enclosed and separate transformer room located at the southeastern corner of the building. One of the partitioned sections was a woodworking shop. There were at least 24 vehicle doors in the eastern and western exterior walls, and doors in the northern and southern walls for pedestrian access. Based on visual inspection, the entire portion of the building was used for vehicle maintenance.

Inside the building was one overhead crane along the length of the building, smaller hoists were suspended over each bay. Chain link fence internal to the building divided the vehicle wash area from the vehicle storage area. A former vehicle lubrication bay location was apparent due to several hose reels suspended from the ceiling. The public areas of the building were generally in good repair with fair housekeeping practices. There were no usable sinks in the restroom.

Hazardous substances were observed included pipe lagging (asbestos) in the transformer room utilidor on the northeastern side. Piping with ACM was marked with pink spray paint. There were two batteries observed, and lacquer, paint, varnish, glue, and resin were present in the woodshop stored loose on shelves or on tables. A 55-gallon drum of CitriKleen was evident near the backhoe. Limited auto maintenance was apparently performed on the vehicles inside the building; the concrete floor was stained with oil and engine coolant. Granular absorbent material was used to capture fugitive liquids which

was bagged and disposed. There were **fire extinguishers** throughout the building that were checked monthly by the local fire department.

The transformer room was unlocked and **open**. ~~The transformer room~~ was walled off from the rest of the building interior; two transformers were present. A subsurface utilidor was located in the northwestern corner of the transformer room, and metal transformer boxes remain. **An** attached restroom was in very poor condition with peeled paint chips on the floor. Peeling **paint** was **evident** throughout Building 128 both inside and out.

The roof leaked from heavy rain during the field visit; small puddles were noted on the floor. Adjacent to the transformer room and internal to the building were five 3-inch diameter water pipes used for fire suppression purposes. There were two 12-inch vents and one 24-inch vent in the roof. Overhead heaters and lights were present throughout the building.

All of the area surrounding Building 128 was paved with asphalt with no landscaped areas. The pavement was in good condition; patches were present. Vegetation was evident, particularly in the railroad track edges between the track and the asphalt. The building perimeter was vacant and unused. Adjacent properties included railroad spurs and a dock.

5.3.3 Asbestos

According to a 1994 survey, Building 128 contained damaged friable ACM. The ACM identified included:

- Caulking
- Floor Tile
- Transite
- Roofing
- Sheet flooring

5.3.4 Polychlorinated Biphenyls (PCBs)

There is a transformer room in the southeastern corner of the building containing two transformers. Transformers 03704 and 03709 had an unknown coolant; the transformers had not been removed. Both apparently leaked; indicated by stained areas on the ground (Navy, 1994b). According to an HLA report dated December 1993, Samples PA5 1SS02 and PA5 1SS03 collected from inside the southern edge of the transformer room contained aroclor-1260. Recommendations for further work included exploratory excavation to evaluate and remove the lateral and vertical extent of PCBs at the Building 128 lease area.

Electrical Substation "U" is associated either with Building 128 or with Building 131 according to available information. A release to the environment has been reported, and staining was found on the concrete floor beneath former transformer locations in Substation U (HLA, 1994b).

5.3.5 Storage Tank System

The records review and site inspection were designed, in part, to ascertain whether underground or aboveground tank systems have been or are present in the lease area. No underground or aboveground tanks have been identified or observed within the lease area.

5.3.6 Oil/Water Separators or other Sumps

No oil/water separators were observed or noted in our review of available documents. Subsurface accessways were observed within the lease area beneath the backhoe and along the eastern side of the central room of the building.

5.3.7 Wastewater Treatment and Disposal

Based on site utility maps (Appendix C) and observations during the field visit, wastewater from the lease area is apparently discharged to the sanitary system at *HPS* (Navy, 1995b). The Navy discharged liquid generated during vehicle maintenance operations into the sanitary sewer system. The restroom is a potential discharge point; no notices have been posted at these locations.

According to the 1995 BRAC report (Navy, 1994a), the use of Building 128 was for vehicle storage and washing; the vehicle washwater flowed to a storm drain inlet. The possible pollutants were surfactants, suspended solids, and TOG; recommended remedial action was to cease vehicle washing on *HPS* property. Surface water runoff was identified for Building 128 in the Fence to Fence Survey by ERM-West.

5.3.8 Air

There was no information to indicate that air permits have existed for Building 128.

5.3.9 Solid Waste Disposal, Landfills, Ponds

None of the available information indicates that the lease area has been used for disposal of solid waste in either landfills or ponds (active or inactive).

5.3.10 Releases of Hazardous Substances to Soil or Groundwater

Based on historic use of the building, the lease areas has been included the IRP as IR-24. Soil contamination appears to be limited to the utility trench northeast of Building 128. Groundwater contamination was present beneath the building (Navy, 1994b).

In close proximity to Building 128, Monitoring Well PA24MW02 was installed to obtain soil and groundwater samples (HLA, 1992). Water samples from PA24MW02A contained TPHd, TPHg, and lead (HLA, 1994a). Recommended additional work included investigation of soil and groundwater to further identify chemical extent. Overexcavation of the transformer room for PCB removal is also recommended. Findings are included in Section 4.1.5, and in the HLA Parcel B Site Inspection Report, dated April 15, 1994, and in the PRC Remedial Investigation Draft Final Report, dated June 3, 1996. See Appendix A for sampling location details.

5.3.11 Specific Hazardous Substances or Potential Materials of Concern

None of the available information indicated that the following are potential substances of concern within the lease area:

- Medical or biohazard wastes
- Ordnance
- Radioactive and/or mixed wastes
- Pesticides
- Radon (High radon concentrations would not be expected for the geologic and environmental setting at HPS.)

The following hazardous substances have been identified within the lease area:

- Asbestos: A survey for ACM was conducted by the Mare Island Naval Shipyard in August 1994. Damaged and friable asbestos was identified. The survey recommended the remediation of certain, specifically identified ACM, and also that an appropriate O and M Plan be established to control the remaining asbestos. Remediation of the specified ACM has been completed.
- Hazardous substances associated with occupant use of the building have been identified
- PCBs

- Lead-based paint: Based on the age and construction of Building **128**, lead-based paint may be present. The lessee will be responsible for all LBP and potential LBP in compliance with all applicable laws and regulations.

5.3.12 Adjacent Properties

Hazardous substances have been detected on adjacent properties (Buildings 123, 125, and 134) which are part of the IR-10, IR-24, and IR-25 investigations, respectively. Further recommended **work** for these IR sites includes remediation of lead and aroclor-1260 affected soil and possible remediation of petroleum hydrocarbon affected soil. See Sections 4.1.2, 4.1.4, and 4.1.**.5**, respectively, for additional information, and Appendix A for sampling location details.

5.3.13 Summary

5.3.13.1 Contents

This section presents a summary of the significant findings, the environmental risks, and the recommendations and conclusions of the study. The lease area has been determined to be suitable for leasing provided the restrictions identified in this report are implemented.

5.3.13.2 Environmental Condition of Property

The Final **EBS** (PRC, 1996a) indicated that the Environmental Condition of Property for the lease area is a Category 6. A Category 6 designation indicates storage, release, disposal, and/or migration has occurred but required response actions have not occurred. The Base Closure Team determined the Environmental Condition of Property Category after review of the **EBS**.

5.3.13.3 Significant Findings

Hazardous substances are present in the lease area and are currently being used. Minor staining of the concrete was observed. It is our understanding that continuing investigations are being performed in the vicinity of the lease area.

On the basis of our review of the information obtained from the references listed in Section 6.0 and from field observations, we have identified the following sources and potential sources of hazardous substances at the lease area:

- **ACM:** Limited remediation and the implementation of an O and M Plan is recommended.
- Hazardous substances used by the occupant; **As** described in Section 5.3.2, the occupants at Building **128** use hazardous substances in their business
- PCBs

Due to previous Navy activities, investigation and characterization of the soil and groundwater quality within the vicinity of the lease area will be continued to determine if additional areawide investigation and/or remediation of soil and groundwater will be necessary.

5.3.13.4 Analysis of Environmental Risks for the Lease Area

Risk analysis includes the evaluation of contaminant sources and characteristics, pathways and potential receptors. The currently available data for the Building **128** lease area is not adequate to permit a complete characterization either of the nature and extent of contaminants or of all potential risks. This review is limited to the lease area. For the anticipated uses of the lease area, the principal pathways of concern include:

- Inhalation of asbestos fibers
- Inhalation, ingestion, and dermal contact created by the use of hazardous substances during work by the occupants
- Inhalation, ingestion, and dermal contact with soil or dust
- Inhalation and ingestion of lead-based materials
- Ingestion and/or dermal contact with groundwater

Contaminated soil is present at or near the lease area but is not generally subject to transport since occupant activities are not expected to result in soil disturbance. Groundwater at the lease area is not accessible at the ground surface.

Based on the HHRA, current health risks are within a range that can be managed, and consequently the associated hazards are not significant. Under the Reasonable Maximum Exposure (RME), the Excess Lifetime Cancer Risk (ELCR) is less than 10^{-6} and the Hazard Index (HI) is less than 1 for current workers in lease areas in Parcel B (PRC 1996, Parcel B, Feasibility Study, Volume II, Section 5.2.1).

The potential risks at the site can be managed through administrative and procedural controls that limit or prevent the exposure of workers and tenants to hazardous substances. Administrative controls include deed restrictions as referenced in the FOSL; and source controls include soil removal among others, as referenced in Section 4.1. Access to and exposure to any identified hazardous substances within the lease area, therefore, will be controlled administratively by physical restrictions and by notification of all concerned parties to reduce exposure of the lessees or occupants. This evaluation

only pertains to current use and does not include considerations regarding altered future usage.

5.3.13.5 Recommendations and Conclusions

The prospective occupant should be made aware of this report and of the fact that continued access for investigations will be required. Occupant access to the lease area is limited as defined by the Navy in the lease agreement; and use of the buildings for storage purposes appears consistent with limited access. Access to the transformer room will be prevented by the Navy. The occupants must comply with all applicable local, state, and federal regulations regarding the use, storage and disposal of hazardous substances. The occupants are responsible for obtaining all necessary permits and licenses for their specific operations.

5.4 Building 134

5.4.1 Lease Area

The lease area is described as the complete area of Building 134 and the complete outdoor area within 10 feet of the building. The building is currently leased and being used for refrigeration service storage with an office and supply facility. The current Lessee is Odaco Inc. (Odaco).

5.4.2 Site Reconnaissance and Background

On December 15, 1995, a field reconnaissance was conducted to document the current condition of the lease area with regard to the potential presence of hazardous substances. The following is a summary of the building's history and of observations made during the visit. Photographs were taken during the field visit and are available upon request.

According to the building profile (Appendix B), Building 134 was constructed in 1945. The building is a one and two-story, concrete structure with an area of 51,716 square feet, see Figure 7. The building structure incorporates concrete beams reinforced with steel I-beams. There are no crawl spaces or basement areas. The building is composed of a large central warehouse with a wing on the eastern side. The northern end of the building is not leased, and the central and southern sections are leased to a refrigeration repair company.

Building 134 was used by the Navy as a machine shop and Q&RA offices for nondestructive testing until 1974 when the Navy ceased shipyard operations at HPS. Painted signs on the outside of the building indicate "Quality Assurance Offices" and "Machine Shop Marine". During the Navy tenure, waste was generated as a result of

engine part cleaning and draining of chemical rinse tanks; the wastes generated were chemical solutions of Penesolve 84 and Penestrip CR. Previous reports indicated waste disposal from this lease area was into the combined sewer system and also into an unidentified landfill.

Since 1974, the lessees have been Cal-Marine Works, Odaco Refrigeration Company, Touring Gear, NAVSTA, and "Palau". The lease area has been used for ship repair, refrigeration machinery and air conditioning machinery repair, as well as storage (for the refrigeration company), and motorcycle repair. A chemical inventory was completed for the building in 1994 (HLA, 1994b), and included tertbutyl phenyl phosphate, Penesolve 814, Penestrip CR, emulsifying agents, oil (PCBs), solvent, hydraulic fluid, and freon. Containers included a degreasing vat, 1-55-gallon container, 23 55-gallon containers, 1 55-gallon container of oil, and 1 oil tank.

According to a 1992 HLA report, there was a large concrete dip tank/degreasing vat labeled "chlorinating materials" built into the foundation that drained into a sump partially inside the building. The tank contained sludge and the sump contained liquid; pools of standing oil were observed on the concrete floor near and under machinery. Details regarding the sump construction were not present in available reports. The sump is not actively used. Sludge and oily liquid was observed in the tank and sump in March 1991 and January 1993. The contents of the dip tank and sump have subsequently been removed and dip tank and sump have been cleaned. The floor tile in one machine room was deformed apparently by oil and corrosives. There were oil stains on the concrete floor with sawdust and absorbent materials on the stains. There were approximately 25 drums in good condition containing trifluoromethane and trichloro-monofluoroethane; solvent vats and transformers apparently remain. There were unidentified chemicals and friable asbestos (HLA, 1992).

Odaco has leased the building since 1985. The main use of the property is storage of parts and tools for servicing of equipment present at remote locations; both marine and nonmarine. Odaco services air conditioning and refrigeration units and also uses the building to store restaurant supply equipment, valves, and gas cylinders.

The main entrance was on the eastern side of the building. Adjacent to the entrance were three small tanks for degreasing parts (each approximately 18 x 36 inches). The Bay Area Air Quality Management District (BAAQMD) issued an exemption for the solvent tanks; there apparently was no exhausting from this shop. Odaco generated the following waste: chlorinated oils at a rate of 10-50 gallons per year, used solvents at a rate of 15 gallons per year, and used motor oil at an unspecified rate. The solvent used was petroleum-based naphtha disposed by a commercial hazardous waste disposal contractor. Odaco was classified as a small quantity generator.

The central room is 40 feet high, and was used for general equipment storage. The walls of the central warehouse room were concrete to about 15 feet in height, with windows extending from the upper walls to the ceiling. There were overhead heaters and lights in

the warehouse area. Subsurface piping was found throughout the concrete floor in the central warehouse and there was a monitoring well present. There were four overhead cranes (20,000 pound capacity and auxiliary hoists of 10,000 pound capacity), and transformers throughout the building. Odaco used one propane-powered and one gasoline-powered forklift in the building. Light to heavy staining was evident on the concrete floor, with the heaviest staining associated with the gasoline-powered forklift in the warehouse area. There was storage of hazardous substances in the approximately 25 55-gallon drums within the lease area. The drummed substances were solvents and oils, and there were also empty freon cylinders. Previous field visits indicated nine acetylene cylinders and one propane cylinder; none were chained and six were missing caps. Two large doors were present on the southeastern and southwestern sides.

Behind the front room was wallboard which is suspected ACM. There was an enclosed office to the right of the entrance door. Asbestos-containing pipe lagging was evident throughout the building marked with pink spray paint. Some overhead lagging had been damaged on the first and second floors. No sinks in the restrooms were posted with notices regarding the proper disposal of hazardous substances. There were no spills in the vicinity of the sinks. Peeling paint had accreted in some areas of the building to a thickness of several chips. There were fluorescent light ballasts; one ballast in a vacant second-floor office appeared to be leaking as indicated by brownish fluid on the floor. Tap water was used for hand washing only; bottled water was used for drinking. The concrete floor was painted in some areas, and floor tile was present on the first and second floors. The second floor contained ceiling tile, and there were restrooms for men and women. There was also an administrative office where personal identification cards and a card reading machine were stored.

The asphalt pavement surrounding the building was in good to fair condition; weeds were growing in the utilidor. To the west, outside the wall was a 12-inch diameter pipe covered by insulation (between the sliding doors).

To the north was an oil/water separator adjacent to the vacant, locked section of Building 134. There were two sliding doors and large exhaust ducts on the vacant side of the building. Outside the building on the west side was a debris box, railroad tracks, and several secured monitoring wells.

Based on discussion with PRC personnel, PRC conducted an indoor air quality investigation in January and February 1996 at *HPS*. Building 134 was selected due to high concentrations of VOCs detected in the vicinity of the building. The indoor air samples were collected in the building from the breathing zone, approximately 5 to 6 feet above the floor surface. Teflon tubing approximately 6 feet long was attached to an evacuated **SUMMA** passivated stainless steel canister equipped with a passive flow controller. The tubing inlet was positioned approximately 5 feet above the floor surface, and was held together with string. The indoor air sample was collected over an 8-hour period. Analytical results of the air sampling is presented on Table 1.0.

5.4.3 Asbestos

Seventeen homogeneous areas were assumed to contain asbestos and twenty-four homogeneous areas were confirmed to contain asbestos as indicated during a survey conducted in 1994. The asbestos identified included:

- TSI
- Transite
- Cinder block
- Floor tile
- Sheet flooring
- Mastic
- Grout
- Roofing

5.4.4 Polychlorinated Biphenyls (PCBs)

There were no transformers containing PCBs identified at the Building 134 lease area (Navy, 1994b).

5.4.5 Storage Tank System

The records review and site inspection were designed, in part, to ascertain whether underground or aboveground tank systems have been or are present in the lease area. No underground or aboveground tanks have been identified or observed within the lease area.

5.4.6 Oil/Water Separators or other Sumps

One oil/water separator was observed at the north end of the building. The oil/water separator is associated with the dip tank / degreasing tank that is located inside the building. Available reports referenced describe this structures as sumps, dip tanks, degreasing vats, and as an oil/water separator. Details regarding the construction of the sump were not present in the reports reviewed to prepare this report. Refer to Section 5.4.2 for the description of the sump and sump contents. The sump in the interior of the building was inaccessible at the time of the field visit. The sump is not actively used.

5.4.7 Wastewater Treatment and Disposal

Based on site utility maps (Appendix C) and observations during the field visit, wastewater from the lease is apparently discharged to the sanitary system at **HPS** (Navy, 1995b). The Navy discharged liquid generated from machining processes into the sanitary system.

5.4.8 Air

According to lessee information, no air permits are needed for the solvent tanks for Odaco; no other air permits were identified.

5.4.9 Solid Waste Disposal, Landfills, Ponds

None of the available information indicated that the lease area has ever been used for disposal of solid waste in either landfills or ponds (active or inactive).

5.4.10 Releases of Hazardous Substances to Soil or Groundwater

Based on historic uses of the building, the lease area has been included in the IRP as IR-25. Groundwater containing solvents has been found in the vicinity of Building 134; a dense nonaqueous phase liquid (DNAPL) is suspected but not confirmed to be present beneath former solvent sumps in Building 134. Previous reports indicated that VOCs and TPH were present in the groundwater beneath Building 134 at the northern corner, as well as VOCs, metals, and TPH near the southwestern wall. Further work for IR-25 within the lease area includes remediation of lead-affected soil and a groundwater removal action for the sump to remediate chemically affected groundwater. Also, remediation of petroleum hydrocarbons in soil remains a possibility. Previous findings are included in Section 4.1.5 and in the HLA Parcel B Site Inspection Report, dated April 15, 1994 (HLA, 1994b), and current information is in the PRC Remedial Investigation Draft Final Report dated June 3, 1996. See Appendix A for sampling location details.

5.4.11 Specific Hazardous Substances or Potential Materials of Concern

None of the available information indicated that the following are potential substances of concern within the lease area:

- Medical or biohazard wastes
- Ordnance
- Radioactive and/or mixed wastes

- Pesticides
- Radon (High radon concentrations would not be expected for the geologic and environmental setting at HPS.)

The following hazardous substances have been identified within the lease area:

- Asbestos: A survey for ACM was conducted by the Mare Island Naval Shipyard in August 1994. Damaged and friable was identified. The survey recommended remediation of certain, specifically identified ACM, and the implementation of an appropriate O and M Plan to control the remaining ACM. Remediation of the specified ACM has been completed but final inspections have not been completed.
- Other hazardous substances associated with occupant use of the building have been identified.
- VOCs in the vicinity of the sump.
- Lead-based paint: Based on the age and construction of Building 134, lead-based paint may be present. The lessee will be responsible for all LBP and potential LBP in compliance with all applicable laws and regulations.

5.4.12 Adjacent Properties

Hazardous substances have been detected on adjacent properties: the former fuel tank farm to the south, Building 156 to the north, and Building 123 to the west as part of the IR-06, IR-20, and IR-10 investigations, respectively. Information on the IR-06, IR-20, and IR-10 investigations are available in Sections 4.1.1, 4.1.3, and 4.1.2, respectively. Further work at IR-06 includes possible remediation of petroleum hydrocarbons in soil, remediation of metals and VOC-affected groundwater, and remediation of lead-affected soil. Further work at IR-10 includes possible remediation of petroleum hydrocarbons in soil, and remediation of metals-affected soil. Further work at IR-20 includes possible remediation of petroleum hydrocarbon-affected soil, and remediation of lead-affected soil. A chemical release had been reported from the former fuel storage facility; the fuel and waste fuel lines from the tank farm to the sea wall and berths are directly under Building 134. Aboveground tanks that previously stored sulfuric acid, distilled water, and electrolytes were located immediately to the west of Building 134 and adjacent to Building 123; see Section 4.1.5. See Appendix A for sampling location details.

5.4.13 Summary

5.4.13.1 Contents

This section presents a summary of the significant findings, the environmental risks, and the recommendations and conclusions of the study. The lease area has been determined

to be suitable for leasing provided the restrictions identified in this report are implemented.

5.4.13.2 Environmental Condition of Property

The Final EBS (PRC, 1996a) indicated that the Environmental Condition of Property for the lease area is a Category 6. A Category 6 designation indicates storage, release, disposal, and/or migration has occurred but required response actions have not occurred. The Base Closure Team determined the Environmental Condition of Property Category after review of the EBS.

5.4.13.3 Significant Findings

Hazardous substances are present in the lease area and currently are being used. No new releases were observed. It is our understanding that continuing investigations are being performed on Building 134.

On the basis of our review of the information obtained from the references listed in Section 6.0 and from field observations, we have identified the following sources and potential sources of hazardous substances at the lease area:

- ACM: Limited remediation, and the implementation of an O and M Plan is recommended
- Hazardous substances used by the occupants: As described in Section 5.4.2, the occupants at Building 134 use hazardous substances in their business.
- Vapor containing VOCs

Due to previous Navy activities, investigation and characterization of the soil and groundwater quality within the vicinity of the lease area will be continued to determine if additional areawide investigation and/or remediation of soil and groundwater will be necessary.

5.4.13.4 Analysis of Environmental Risks for the Lease Area

Risk analysis includes the evaluation of contaminant sources and characteristics, pathways and potential receptors. The currently available data for the Building 134 lease area is not adequate to permit a complete characterization either of the nature and extent of contaminants or of all potential risks. This review is limited to the lease area. For the anticipated uses of the lease area, the principal pathways of concern include:

- Inhalation of asbestos fibers
- Inhalation of VOC vapor

- Inhalation, ingestion, and dermal contact created by the use of hazardous substances in performance of work by the occupants
- Inhalation, ingestion, and dermal contact with soil or dust
- Ingestion and/or dermal contact with groundwater
- Inhalation and ingestion of lead-based materials

Contaminated soil is present at the lease area but is not generally subject to transport since occupant activities are not expected to result in soil disturbance. Groundwater at the lease area is not accessible at the surface. VOCs have been detected in ambient air inside Building 134.

Based on the HHRA, current health risks are within a range that can be managed, and consequently the associated hazards are not significant. Under the Reasonable Maximum Exposure (RME) the Excess Lifetime Cancer Risk (ELCR) is less than 10^{-6} and the Hazard Index (HI) is less than 1 for current workers in lease areas in Parcel B.

The potential risks at the lease area can be managed through administrative and procedural controls that limit or prevent the exposure of workers to hazardous substances. Administrative controls include deed restrictions as referenced in the FOSL; and source controls include soil removal among others, as referenced in Section 4.1. Access to, and exposure to, any identified hazardous substances within the lease area, therefore, will be controlled administratively by physical restrictions and by notification of all concerned parties to reduce exposure of the lessees or occupants. This evaluation only pertains to current usage and does not include considerations regarding altered future use.

5.4.13.5 Recommendations and Conclusions

The prospective occupant should be made aware of this report and of the fact that continued access for investigations will be required. Occupant access to the lease area is limited as defined by the Navy in the lease agreement; and use of the buildings for refrigeration service and storage purposes appears consistent with limited access. The occupant must comply with all applicable local, state, and federal regulations regarding the use, storage and disposal of hazardous substances. The occupants are responsible for obtaining all necessary permits and licenses for their specific operations.

6.0 REFERENCES

California Base Closure Environmental Committee, 1995. Evaluation of Risks for the Purpose of Reaching a FOSL, January 9, 1995.

Department of the Navy, Naval Facilities Engineering Command, 1994. DOD Policy for Asbestos, Lead Paint, and Radon at BRAC Properties, November 15, 1995.

- Harding Lawson Associates, 1994a. Final Site Assessment Report, Potentially Contaminated Sites, Parcels B, C, D, and E, Naval Station Treasure Island, Hunters Point Annex, San Francisco, California, prepared for the Department of the Navy, Base Closure Team, Western Division Naval Facilities Engineering Command, San Bruno, under contract to PRC Environmental Management, Inc., April 15, 1994.
- Harding Lawson Associates, 1994b. Draft Final, Parcel B Site Inspection Report (Including Drydock 4 Area), Naval Station Treasure Island, Hunters Point Annex, San Francisco, California prepared for the Department of the Navy, Base Closure Team, Western Division Naval Facilities Engineering Command, San Bruno, under contract to PRC Environmental Management, Inc., April 18, 1994.
- Harding Lawson Associates, 1994c. Preliminary Draft, May 1994, OU II Quarterly Groundwater Monitoring Data Submittal, Western Division, Hunters Point Annex, San Francisco, California, prepared for the Department of the Navy, Base Closure Team, Western Division Naval Facilities Engineering Command, San Bruno, under contract to PRC Environmental Management, Inc., September 6, 1994.
- Mare Island, 1994a. Asbestos Survey Report, Naval Station Treasure Island, Hunters Point Annex, Parcel A and Dry Docks, San Francisco, California, 1994.
- Mare Island, 1994b. Asbestos Survey Report, Naval Station Treasure Island, Hunters Point Annex, Parcels "B-E", San Francisco, California, 1994.
- Navy, 1994b. Baseline Environmental Report, Volume 2a: Parcel B, C, D and E, Hunters Point Annex, San Francisco, California, September, 1994.
- Navy, 1995a. Base Realignment and Closure Cleanup Plan (BCP) for Hunters Point Annex, San Francisco, California, Engineering Field Activity West, Naval Facilities Engineering Command, prepared by PRC Environmental Management, February 24, 1995.
- PRC Environmental Management Inc., 1994a. BRAC Cleanup Plan, Naval Station Treasure Island, Hunters Point Annex, San Francisco, California, prepared for the Department of the Navy, Base Closure Team, Western Division Naval Facilities Engineering Command, San Bruno, March 5, 1994.
- PRC Environmental Management Inc., 1994b. Draft Technical Memorandum, Integration of Facility-Wide Hydrogeologic Data (*HPS* Hydrogeologic Report), Volume I of V, Text, Appendices, Figures and Tables, prepared for the Department of the Navy, Base Closure Team, Western Division Naval Facilities Engineering Command, San Bruno, May 27, 1994.

PRC Environmental Management Inc., 1994c. Draft Summary Report of Phase I and Phase II UST Removals and Closures in Place, prepared for the Department of the Navy, Base Closure Team, Western Division Naval Facilities Engineering Command, San Bruno, July 12, 1994.

PRC Environmental Management Inc., 1995. Draft Facility-Wide Groundwater Monitoring Plan, Hunters Point Annex, San Francisco, California, November 27, 1995.

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PRC Environmental Management Inc., 1996b. Final Basewide Environmental Baseline Survey Volumes I and II, Hunters Point Annex, San Francisco, California, June 3, 1996.

PRC Environmental Management Inc. (PRC) 1996. Parcel B Feasibility Study Draft Final Report, Volumes I, II, and X, Hunters Point Shipyard, San Francisco, California, September 3.

PRC Environmental Management Inc. (PRC) 1996. Parcel B Proposed Plan Draft, Hunters Point Shipyard, San Francisco, California, September 3.

RADIAN, 1995. Corrosion Evaluation and Control Treatment, Lead and Copper Ion Drinking Water, Hunters Point Annex, San Francisco, California, March, 1995

7.0 CERTIFICATION

I certify that the property conditions described in this report and the information referenced above are consistent with my knowledge of the lease area and the *HPS* and that the information contained in this report is true and correct, to the best of my knowledge.

Michael E. McClelland
Engineering Field Activity West
Naval Facilities Engineering Command
BRAC Environmental Coordinator

Date

Table 1.0 Indoor Ambient Air Data and PRG Comparison*
Building 134 Lease Area
Hunters Point Shipyard
San Francisco, California

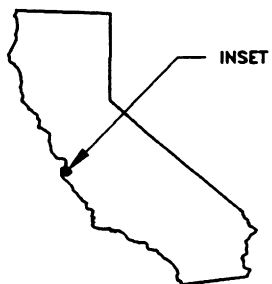
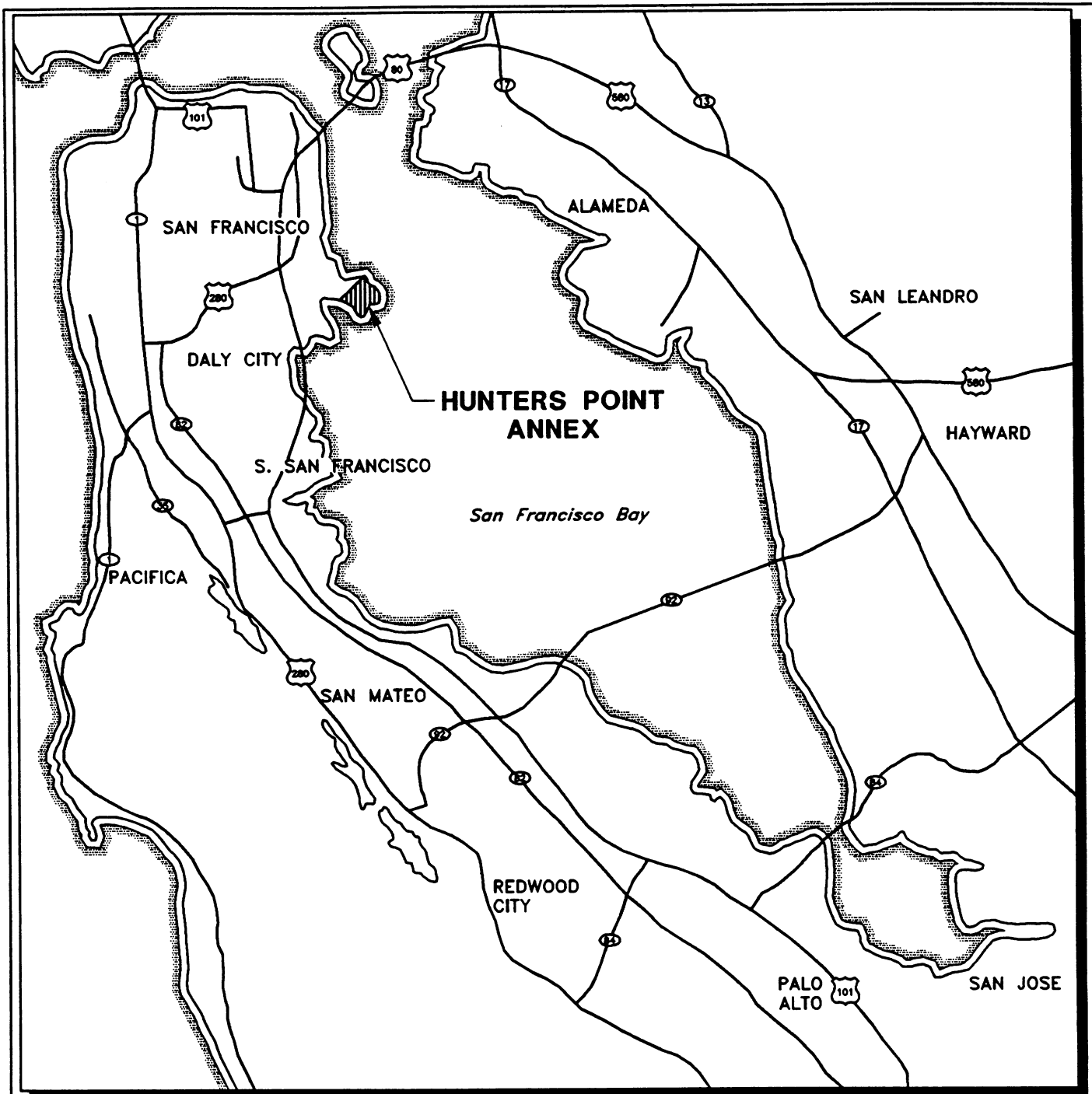
<u>Chemical Constituent</u>	<u>Ambient Air</u>	<u>PRG**</u>
1,2-dichlorobenzene	-	210
1,3-dichlorobenzene	-	NA
1,4-dichlorobenzene	-	0.28
1,1-dichloroethane	-	520
1,1-dichloroethene	-	0.038
trans-1,2-dichloroethene	-	73
1,2-dichloroethane	-	0.074
1,2-dichloropropane	-	0.099
trans-1,3-dichloropropene	-	0.052
cis-1,3-dichloropropene	-	0.052
cis-1,2-dichloroethene	-	NA
1,1,2,2,-tetrachloroethane	-	0.033
1,1,1-trichloroethane	-	1,000
1,1,2-trichloroethane	-	0.12
1,2,4-trimethylbenzene	-	NA
1,3,5-trimethylbenzene	-	NA
2-butanone	-	1,000
4-ethyl toluene	-	NA
4-methyl-2-pentanone	-	NA
acetone	-	370
benzene	1.82	0.23
benzyl chloride	-	4.9
bromodichloromethane	-	0.11
bromoform	-	1.7
bromomethane	-	5.2
carbon disulfide	-	10
carbon tetrachloride	-	0.13
chlorobenzene	-	21
chloroethane	-	NA
chloroform	-	0.084
chloromethane	-	1.1
chlorodibromomethane	-	0.08
2-chloroethyl vinyl ether	-	NA
dichlorodifluoromethane	16.62	210
ethylbenzene	-	1,100
2-hexanone	-	NA
m-,p-xylene	-	730
methylene chloride	311.3	NA
o-xylene	-	730
styrene	-	1,100
tetrachloroethene	-	3.3
toluene	4.22	400

Table 1.0 Indoor Ambient Air Data and PRG Comparison*
Building 134 Lease Area
Hunters Point Shipyard
San Francisco, California

<u>Chemical Constituent</u>	<u>Ambient Air</u>	<u>PRG**</u>
trichloroethene	-	1.1
trichlorofluoromethane	2.81	730
vinyl acetate	-	210
vinyl chloride	-	0.022

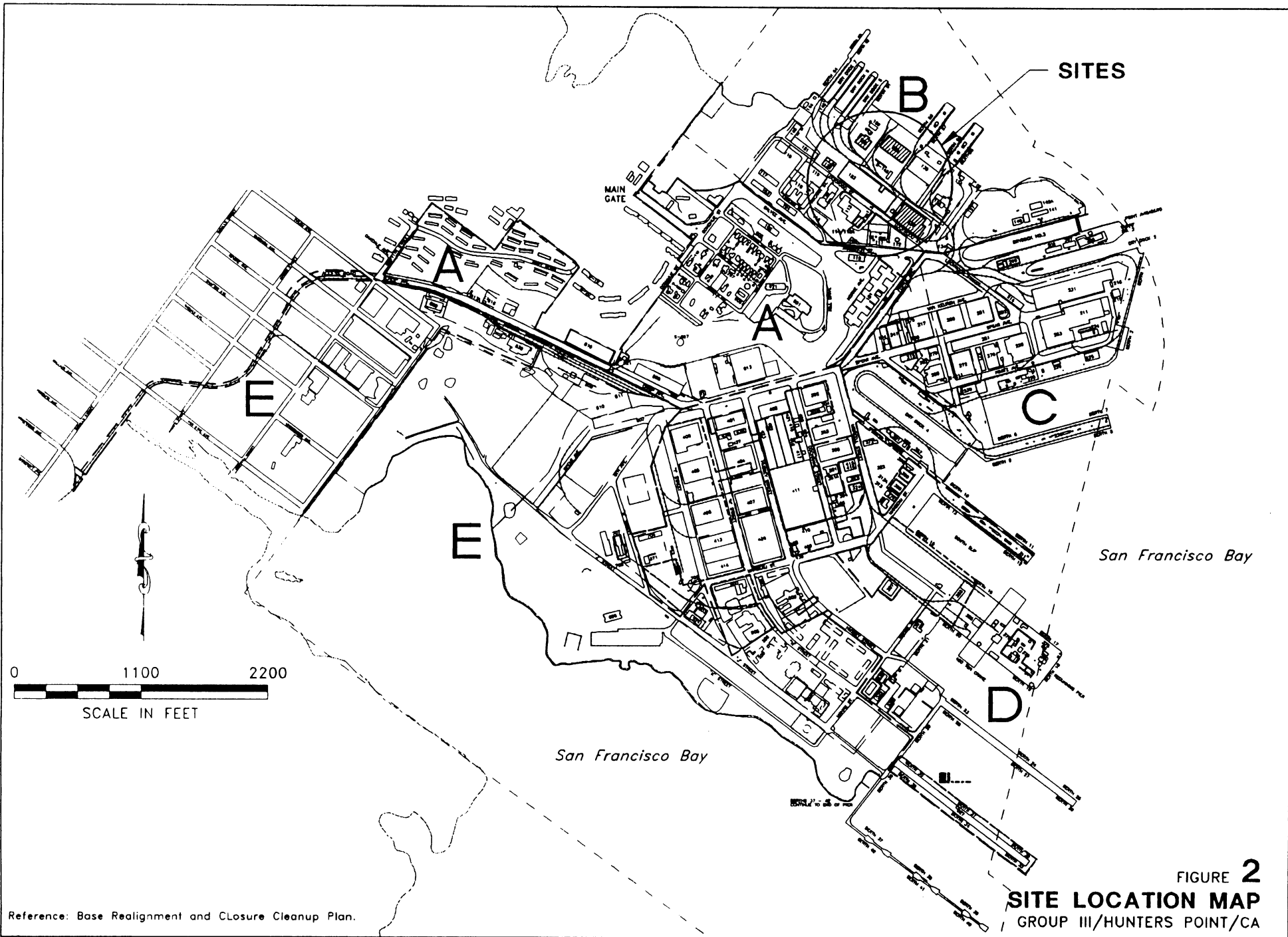
Notes:

- 1) * All units in micrograms per cubic meter.
- 2) PRG** = preliminary remediation goals.
- 3) **bold** = detected concentration exceeds PRG.
- 4) - = not detected.



Reference: Preliminary Assessment Other Areas/Utilities
Hunters Point Annex, San Francisco, California
Harding Lawson Associates, October 19, 1990.

FIGURE **1**
LOCATION MAP
GROUP III/HUNTERS POINT/CA



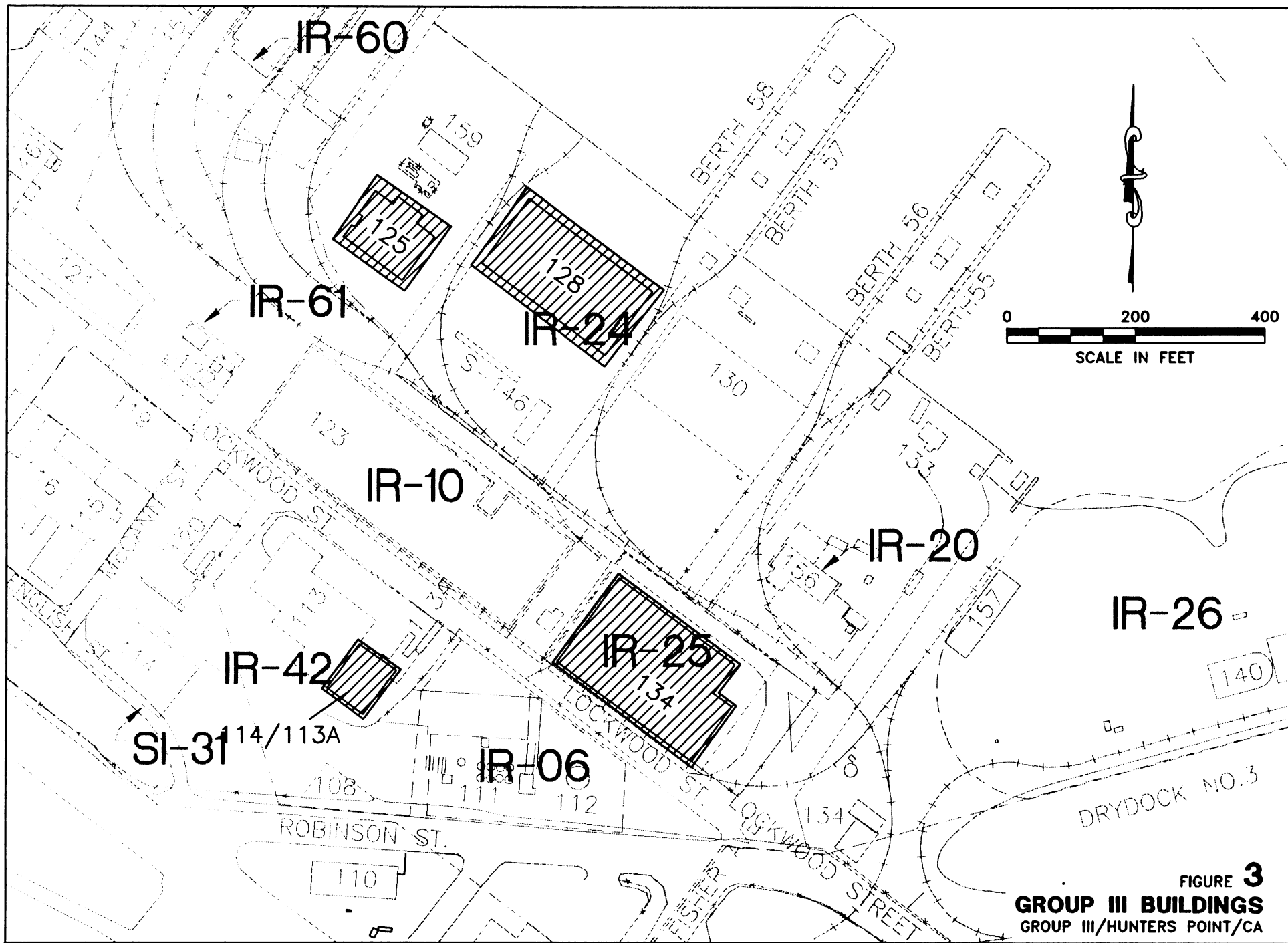
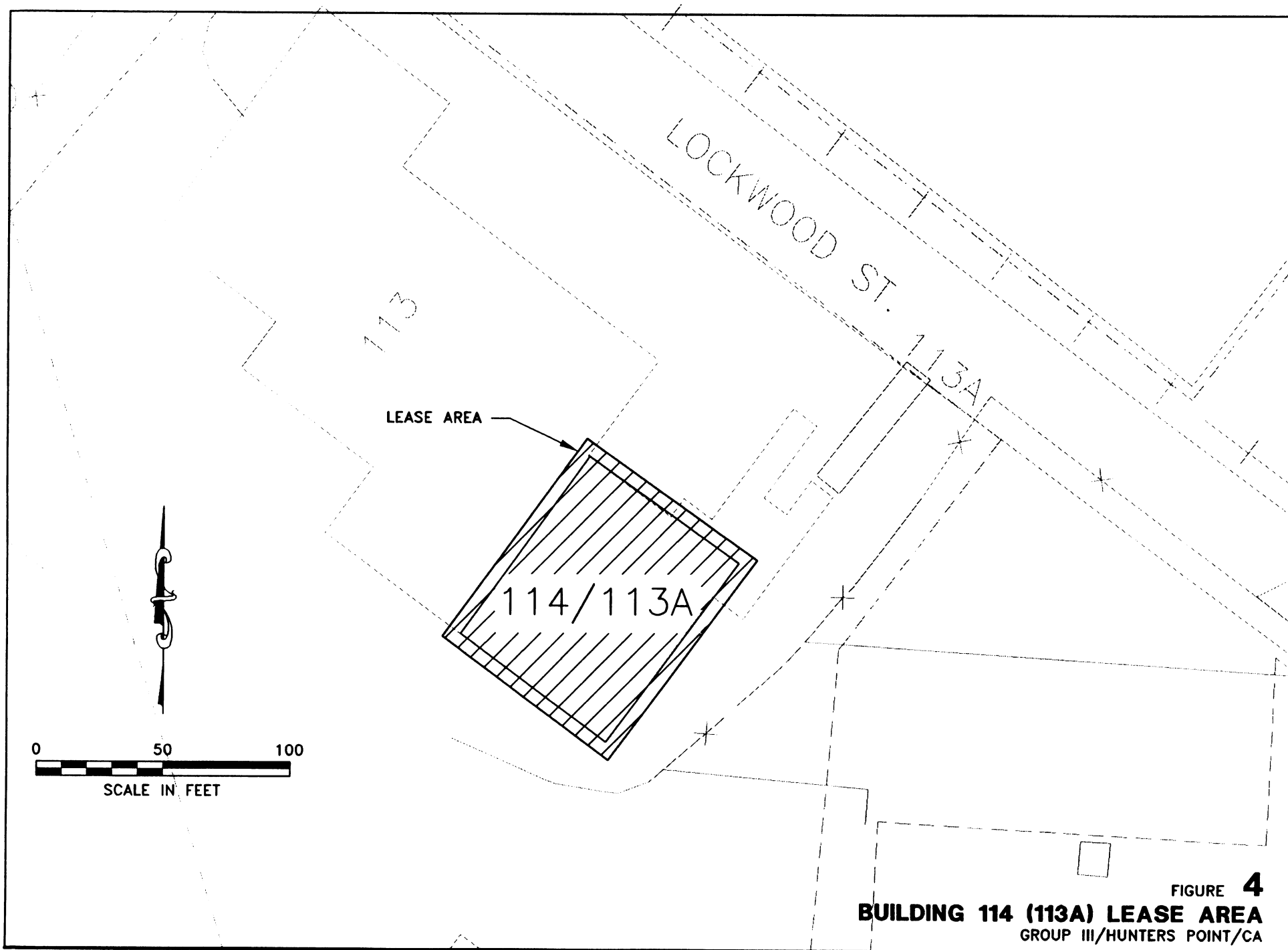


FIGURE 3
GROUP III BUILDINGS
GROUP III/HUNTERS POINT/CA



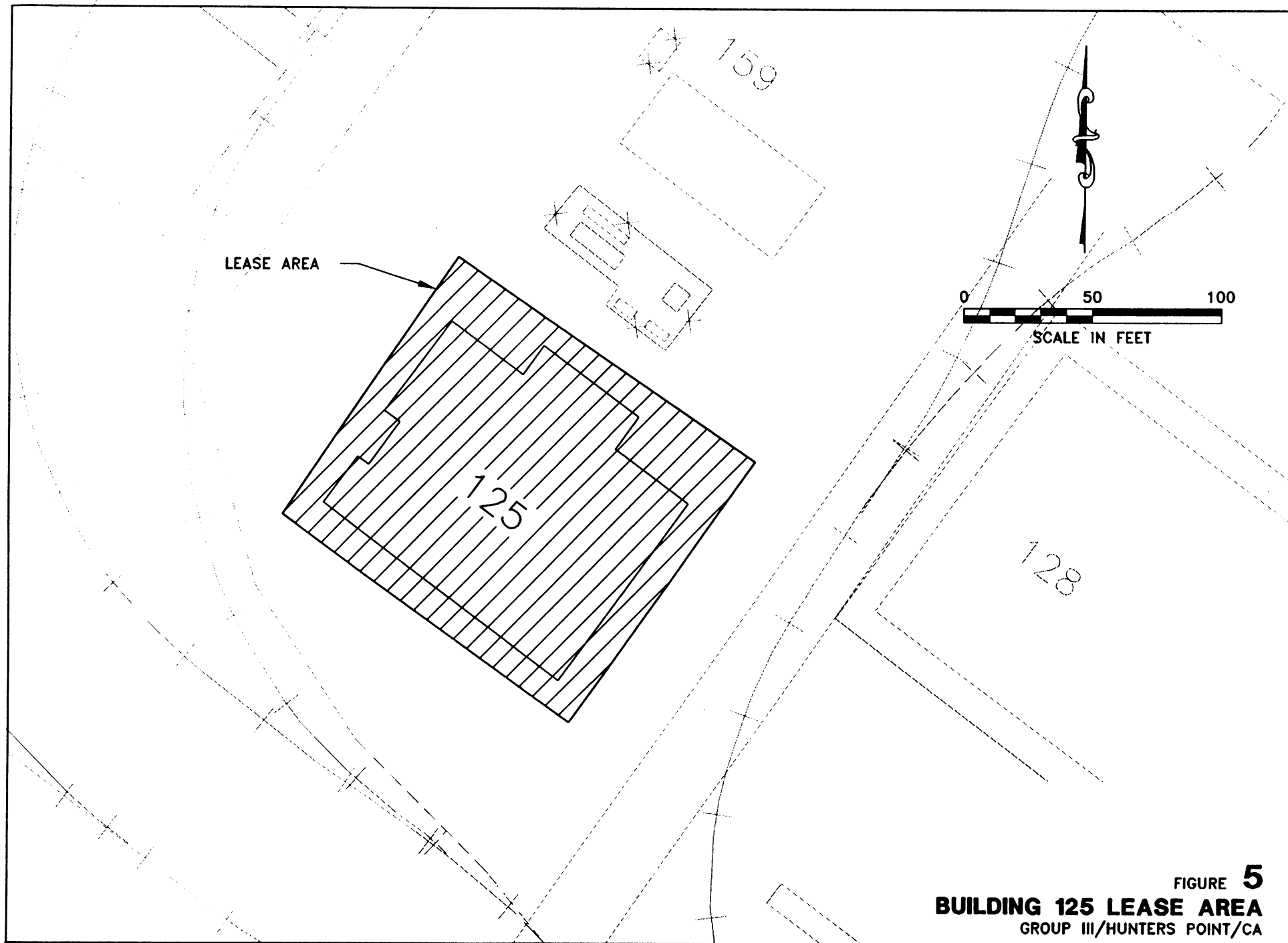


FIGURE 5
BUILDING 125 LEASE AREA
GROUP III/HUNTERS POINT/CA

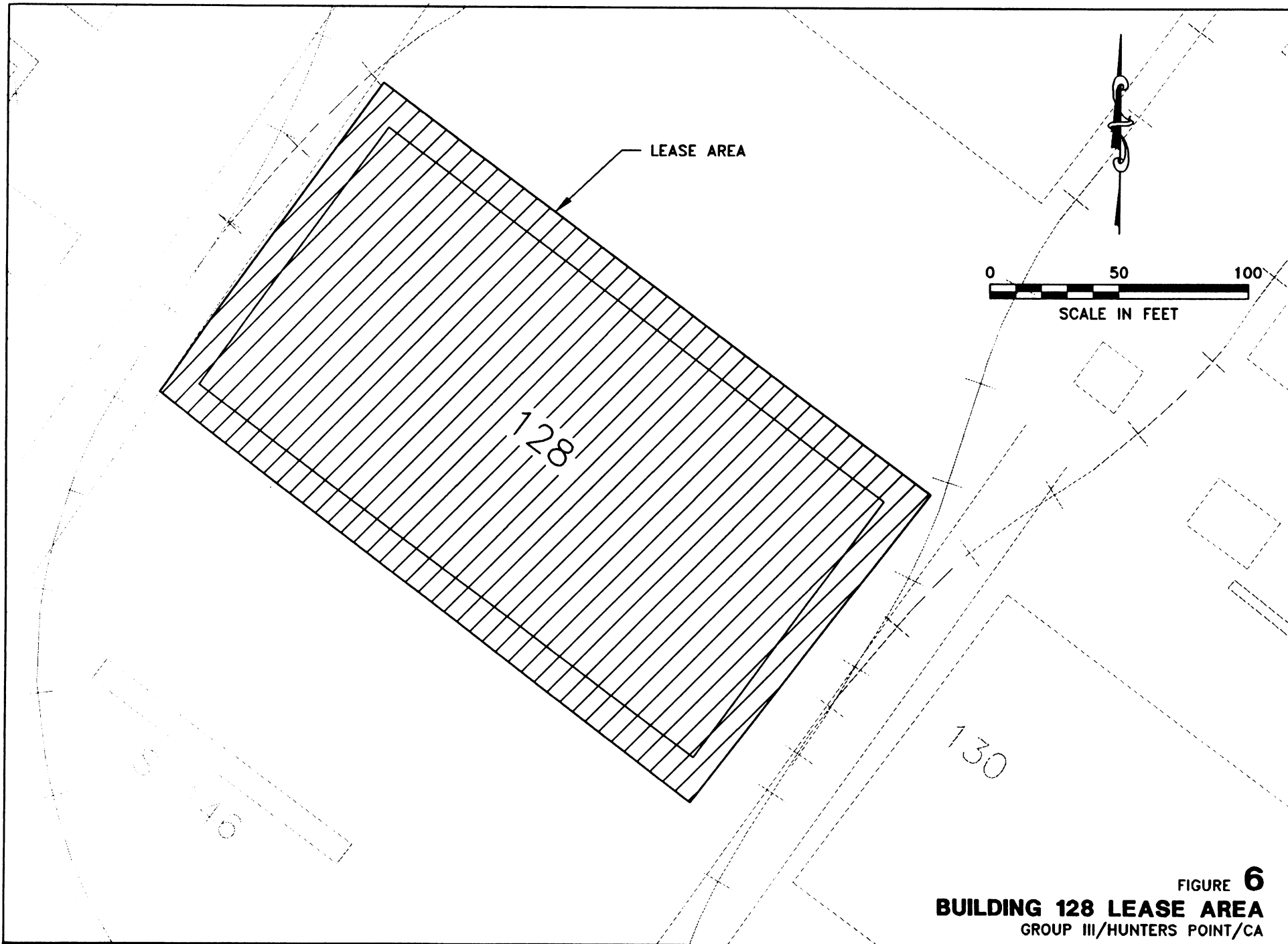


FIGURE 6
BUILDING 128 LEASE AREA
GROUP III/HUNTERS POINT/CA

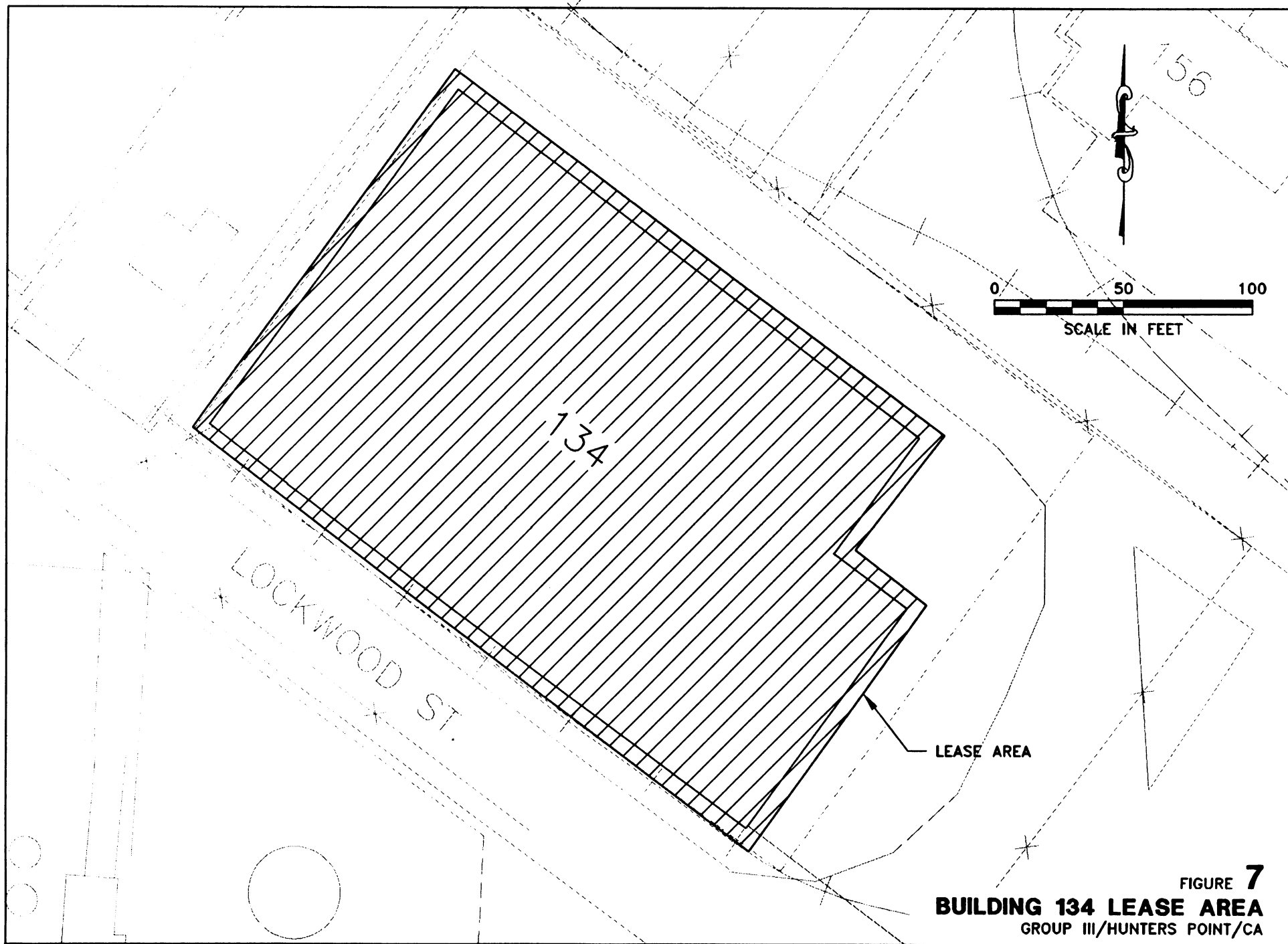


FIGURE 7
BUILDING 134 LEASE AREA
GROUP III/HUNTERS POINT/CA

APPENDIX A

Sampling Location Details

B

IR-10

SAN FRANCISCO BAY



EXPLANATION:

- ◆ IR10MW12A A-AQUIFER MONITORING WELL
- ◆ IR06MW48F BEDROCK MONITORING WELL

- EXISTING IR SITE
- PARCEL BOUNDARY

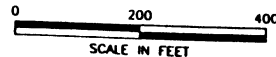
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NOTES:

- 1) REFER TO TABLE 13 FOR QUALIFIER DESCRIPTIONS.
- 2) METAL RESULTS BY EPA METHOD 6010 (BERYLLIUM AND CHROMIUM), EPA METHOD 7060 (ARSENIC), EPA METHOD 7196 (HEXAVALENT CHROMIUM).

A

C



Harding Lawson Associates
Engineering and
Environmental Services

Analytical Results of Metals in Groundwater,
Sites IR-6 and IR-10, May 1994
OU II Quarterly Groundwater Monitoring Data Submittal
Western Division
Hunters Point Annex
San Francisco, California

PLATE

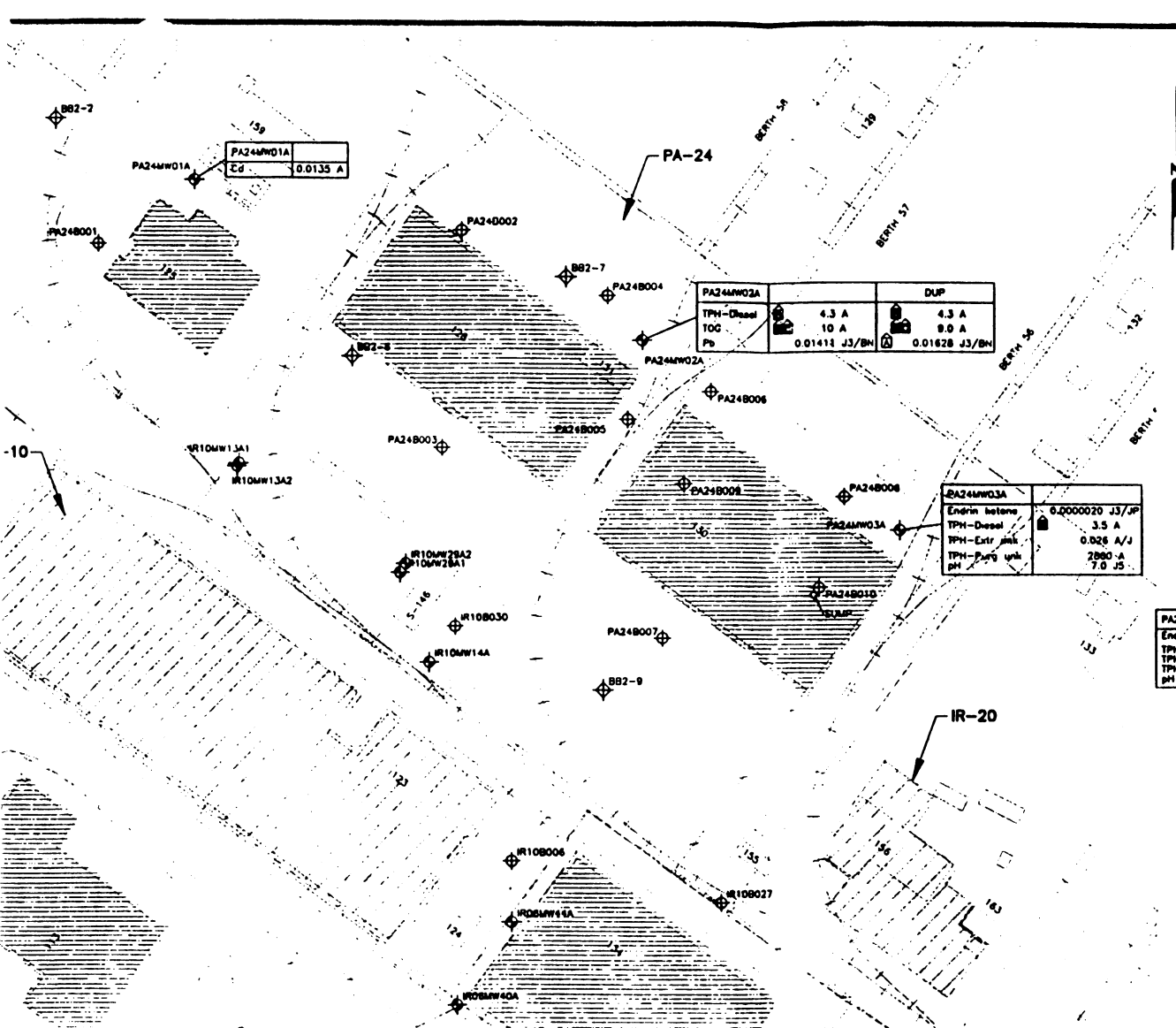
9

DRAWN JDB NUMBER
DMC 11400 1003

APPROVED DATE
8/94

REVISED DATE

11400141, 2000-0
19920425, 1.570



ILANA

SI SAMPLING LOCATIONS

- PA24MW03A A-AQUIFER MONITORING WELL
- PA24B010 SOIL BORING

RI SAMPLING LOCATIONS

- IR10MW14A A-AQUIFER MONITORING WELL
- IR10B030 SOIL BORING

PRE-RI SAMPLING LOCATIONS

- BB2-9 EMCON SOIL BORING

- 159 EXISTING BUILDING
- EXISTING IR SITE
- EXISTING BUILDING OR AREA INCLUDED IN SITE INSPECTION
- 155 LOCATION OF FORMER BUILDING
- IR SITE BOUNDARY
- PA SITE BOUNDARY
- PARCEL BOUNDARY
- RAILROAD TRACKS
- FENCE
- SAMPLE LOCATION

PA24MW02A	DUP
TPH-Diesel	4.3 A
TOC	10 A
Pb	0.01411 J3/BH
	0.01628 J3/BH

PA24MW03A	
Endrin Isotene	0.0000020 J3/JF
TPH-Diesel	3.5 A
TPH-Extr unit	0.026 A/J
TPH-Purg unit	2800 A
pH	7.0 J5

PA24MW03A	
Endrin Isotene	0.0000020 J3/JF
TPH-Diesel	3.5 A
TPH-Extr unit	0.026 A/J
TPH-Purg unit	2800 A
pH	7.0 J5

PROJECT AND LABORATORY QUALIFIERS:
QUALIFIERS ARE DEFINED IN
TABLES F-48 AND F-49

CONCENTRATIONS IN MILLIGRAMS
PER LITER UNLESS OTHERWISE NOTED

ANALYTE - INCLUDES ALL DETECTED ORGANIC
AND ALL INORGANICS EXCEEDING INTERM
AMBIENT LEVELS (IALs) FOR HPA

KEY TO HEALTH RISK NOTATION SYSTEM

- RECEPTOR
- A CHILD RESIDENT
 - B ADULT RESIDENT
 - C COMMERCIAL WORKER
- RISK LEVEL/TYPE
- ORANGE EXCEEDS 10-4 HBLc
 - YELLOW EXCEEDS 10-5 HBLc
 - BLUE EXCEEDS 10-6 HBLc
 - EXCEEDS HBLn

0 100 200
SCALE IN FEET



Harding Lawson Associates
Engineering and
Environmental Services

DRAWN JOB NUMBER
DEK 11400 090502

Analytical Results, Groundwater, PA-24,
Buildings 124, 125, 126, and 130
Parcel B Site Inspection Report
Naval Station Treasure Island
Hunters Point Annex
San Francisco, California

APPROVED DATE
12/95

PLN:
28
REVISED TO

PA24MW01A	2.25	4.25	6.75	9.25	11.75	16.75
Acetone						
Carbon disulfide	0.0060 A/BJ		0.0040 A/BJ			
MBK						
Xylenes				0.0030 A/J	23 A	
TPH-Diesel	52 A			270 A		
TPH-Gasoline	40 A			22.1 A/S		
TOC	7.7 A	8.3 A	8.0 A	6.4 A	8.7 A	8.1 A
pH						
Chrysotile/Asbestos						

PA24B002	2.25	4.25	6.75	9.25
Toluene			0.04831 A	
Ethyl benzene			0.01373 A	
Xylenes			0.07087 A	
Acetone			0.13 J3	
TPH-Diesel	38 J3	39 A	140 A	32 A
TPH-Gasoline	320 A	77 A	21000 A	85 A2
TOC	6.4 A	8.8 A	8.8 A	8.2 A
pH	2.0 A	2.0 A	2.0 A	3.0 A
Chrysotile/Asbestos				

PA24B004	2.25	4.25	6.75	9.25	11.75
Carbon disulfide	0.00581 V37/J		0.00653 J7/J		
MBK					
Xylenes	0.0055 V4				
Total Noncarc PAHs	0.34692				
TPH-Diesel	1.4 V4				
TPH-Gasoline	92V				
TOC	27000 V	28 A	24 A	28 A	4800 A
pH	5.3 V	160 A	180 A	80 A	7500 A
Chrysotile/Asbestos		8.2 A	8.2 A	8.3 A	5777 A

PA24B003	1.75	3.75	6.75	9.25	11.75	16.75	21.75
Benzene	130 A						
TPH-Diesel	200 A						
TOC	129.87 J3/N						
Cu	49.71 J3						
TPH-Diesel	320 A						
TPH-Gasoline	148.05 J3/N						
TOC	138.38 A						
pH	191.74 A						
Chrysotile/Asbestos	8.4 A	8.9 A	8.4 A	8.8 A	9.4 A	9.5 A	8.8 V

PA24MW02A	2.25	4.25	6.75	9.25	11.75
Carbon disulfide	0.0020 A/J			0.0020 A/J	
MBK					
Xylenes	0.40				
Total Noncarc PAHs	250 A				
TPH-Diesel	110 A			1300 A	330 V
TPH-Gasoline	32000 A			1100 A	230 V
TOC	22.8 J2/J			7.7 J5	8.1 W5
pH	8.1 J5			7.7 J5	2.0 A
Chrysotile/Asbestos					

PA24B005	2.75	4.75	6.75	9.25
Carbon disulfide		0.01038 J7/J	0.00665 J7/J	0.00736 V/J
MBK		0.0036 A/J	0.00808 A/J	
Xylenes				0.17902
Total Noncarc PAHs				0.18738 A/J
TPH-Diesel				0.045 J3/J
TPH-Gasoline				130 A
TOC	12000 A	25 A	38 A	3800 A
pH	184.84 A/S	89 A		
Chrysotile/Asbestos				

PA24B008	2.25	4.25	6.75
TPH-Diesel	51 A		
pH	18.1 J2/J		
Chrysotile/Asbestos	8.3 J5	8.5 J5	8.3 J5

PA24B006	2.25	4.25
Carbon disulfide		0.05818 J7
MBK		0.0358 J7
Xylenes		0.00548 A/J
Total Noncarc PAHs		0.00587 A
TPH-Diesel		0.01616 V
TPH-Gasoline		1100 A
TOC	78 A	31000 A
pH	36.62 J3/N	58000 A
Chrysotile/Asbestos	8.1 A	8.6 A

PA24B010	2.75	3.25	6.25
Carbon Tet			0.0118 A/J
TCE			0.33+36 A
TPH-Diesel	6.29231 A	32 A	0.03938 J5
TPH-Gasoline	720 A	1200 A	540 A
TOC	9.1 A	8.6 A	8.6 A
pH	2.0 A		
Chrysotile/Asbestos			

PA24B007	2.25	4.25	6.75	9.25	11.75
Total Carc PAHs		0.29101			
Chrysotile		0.33776			
Total Noncarc PAHs		3100 A			
TPH-Diesel	180 A	3100 A	680 A	180 A	150 A
TPH-Gasoline	2700 A	19000 A	110000 A	6000 A	26464 A
TOC	8.9 A	8.9 A	8.9 A	8.9 A	8.9 A
pH					
Chrysotile/Asbestos					

PA24MW03A	2.25	4.25	6.25	8.25	11.75	16.75
Carbon disulfide			0.0020 A/BJ		0.0070 A/J	0.0080 A/J
MBK						
Xylenes						
Total Noncarc PAHs						
TPH-Diesel	7.8 A					
TPH-Gasoline	7.8 A					
TOC	3.5 A/BJ					
pH	58 A	18 A		290 V	8100 A	7500 A
Chrysotile/Asbestos						

EXPLANATION

SI SAMPLING LOCATIONS

- PA24MW03A A-AQUIFER MONITORING WELL
- PA24B010 SOIL BORING

RI SAMPLING LOCATIONS

- IR10MW14A A-AQUIFER MONITORING WELL
- IR10B030 SOIL BORING

PRE-RI SAMPLING LOCATIONS

- BB2-9 EMCON SOIL BORING
- 159 EXISTING BUILDING

EXISTING IR SITE

EXISTING BUILDING OR AREA INCLUDED IN SITE INSPECTION

LOCATION OF FORMER BUILDING

IR SITE BOUNDARY

PA SITE BOUNDARY

PARCEL BOUNDARY

RAILROAD TRACKS

FENCE

SAMPLE LOCATION

SAMPLE DEPTH IN FEET

BELOW GROUND SURFACE

PROJECT AND LABORATORY QUALIFIERS. QUALIFIERS ARE DEFINED IN TABLES F-48 AND F-49

CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM UNLESS OTHERWISE NOTED

ANALYTE - INCLUDES ALL DETECTED ORGANICS AND ALL INORGANICS EXCEEDING INTERIM AMBIENT LEVELS (IALs) FOR HPA

KEY TO HEALTH RISK NOTATION SYSTEM

- RECEPTOR
 - A CHILD RESIDENT
 - B ADULT RESIDENT
 - C COMMERCIAL WORKER

- RISK LEVEL/TYPE
 - EXCEEDS 10-4 HBLc
 - EXCEEDS 10-5 HBLc
 - EXCEEDS 10-6 HBLc
 - EXCEEDS HBLn



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EXPLA

SI SAMPLING LOCATIONS

- PA25B008 SOIL BORING
 PA25SS10 SURFACE SOIL SAMPLE
 PA25SU01 SUMP SAMPLE



EXISTING BUILDING



EXISTING IR SITE



EXISTING BUILDING OR AREA INCLUDED IN SITE INSPECTION



LOCATION OF FORMER BUILDING



IR SITE BOUNDARY



PA SITE BOUNDARY



PARCEL BOUNDARY



RAILROAD TRACKS



FENCE

SAMPLE LOCATION

SAMPLE DEPTH IN FEET
BELOW GROUND SURFACE OR MATRIX

PA25B008	4.75
PCE	0.0040 A/J
Total Core PAHs	0.36
Chrysene	0.36 A/J
TPH-Extr unk	65 A
TOC	3300 J5/B
pH	8.6 A

PROJECT AND LABORATORY QUALIFIERS:
QUALIFIERS ARE DEFINED IN
TABLES F-48 AND F-49CONCENTRATIONS IN MILLIGRAMS
PER KILOGRAM OR MILLIGRAMS PER
LITER UNLESS OTHERWISE NOTEDANALYTE - INCLUDES ALL DETECTED ORGANIC
AND ALL INORGANICS EXCEEDING INTERIM
AMBIENT LEVELS (IALs) FOR HPA

KEY TO HEALTH RISK NOTATION SYSTEM

RECEPTOR

- (A) CHILD RESIDENT
 (B) ADULT RESIDENT
 (C) COMMERCIAL WORKER

RISK LEVEL/TYPE

- ORANGE ☐ EXCEEDS 10-4 HBLc
 YELLOW ☐ EXCEEDS 10-5 HBLc
 BLUE ☒ EXCEEDS 10-6 HBLc
☐ EXCEEDS HBLn

PA25SU01	PROD.	WATER
Vinyl chloride		0.0050 A/J
Methylene Chloride		3.5 A/B
Chloroform		0.0020 A/J
1,2-DCA		0.0020 A/J
CE		0.026 A
Benzene		0.0010 A/J
MBX		0.0070 A/J
PCE		0.0020 A/J
Toluene		0.0070 A/J
1,1,2,2-PCA		0.0010 A/J
Chlorobenzene		0.0020 A/J
Ethyl benzene		0.0010 A/J
Styrene		0.0070 A/J
Phenol		17 A
2-Methylphenol		3 A
4-Methylphenol		5 A
2,4-Dimethylphenol		0.58 A/J
Methylene Chloride	95000 A/B	0.14 A
Acetone-1280	800000 A	15 A/B
TPH-Extr unk	200000 A	0.82 A/B
TPH-Purg unk	780 A/I	
TOC	790000 A/B	
Pb	129 A/S	0.0019 A/B
Be	3.6 A/B	0.0358 A/B
Cd	0.3 A/B	
Cr	118 A	33 A
Cu	98.3 A	0.482 A
Mn	230 A	1.05 A
Mo	1.0 A/B	3.65 A/B
Ni		0.136 A
Se		0.0177 A/B
V		76.8 A
Zn		41.3 A
Co		0.0030 A/B
Fe	142 A	0.0048 A/B

PA25B002	11.25	16.25
1,2-DCE (total)		0.06775 V
1,1-DCA		0.0640 V
TOC		0.02625 V
PCE	0.00827 A/J	0.1256 V
Chlorobenzene	540 A	0.00635 V
TPH-Diesel	26000 A	230 V
TOC	15.63 J3/H	35000 V
Pb	8.1 A	
pH		7.6 A

PA25B008	4.75
PCE	0.0040 A/J
Total Core PAHs	0.36
Chrysene	0.36 A/J
TPH-Extr unk	65 A
TOC	3300 J5/B
pH	8.6 A

PA25SS10	1.25
Total Core PAHs	1.43
Benz(a)anthracene	0.42 A
Chrysene	0.40 A
Benz(b)fluoranthene	0.27 A/J
Benz(a)fluoranthene	0.34 A/J
Total Noncarc PAHs	1.18
4,4'-DDD	0.0018 A/J
4,4'-DDE	0.00008 A/J
TPH-Mix Oil	24 A
TOC	110 A

PA25SS04	0.75
Acetone-1280	3.8 A
TPH-Extr unk	3400 A
TOC	8000
Cu	485 J2/+
Pb	1230 J2/+
Zn	1770 A/B
pH	7.4 A

PA25SU04	VAT LIQUID	SUMP SLUDGE
Pentachlorophenol		30782.02 A
Acetone-1280		7100 J3/P
TPH-Diesel	0.35 A/J	900 A
TPH-Gasoline	2.3 A	
TOC	16000 A	7800 A
Pb		2.09 J3
As		11.77 J3/H
Be		19381 A
Bo	0.12 A/B	3481.07 A
Cd		378.46 A
Co		15723 A
Cr		1063.33 A
Cu		55.58 A
Cv		2188.94 A
Fe		428.14 A
Mn		484.73 A/B
Mo		845.09 A
Ni		428.14 A/B
Ag	1.37 A/B	28.87 A
Nb	30.54 A/B	8852.84 A
V		44.44 A/B
Zn		11334.3 A
Mo		88.07 A
Cr		5500 J3
pH		7.0 A

PA-24

IR-20

PA-25

IR-6

0 50 100
 SCALE IN FEET



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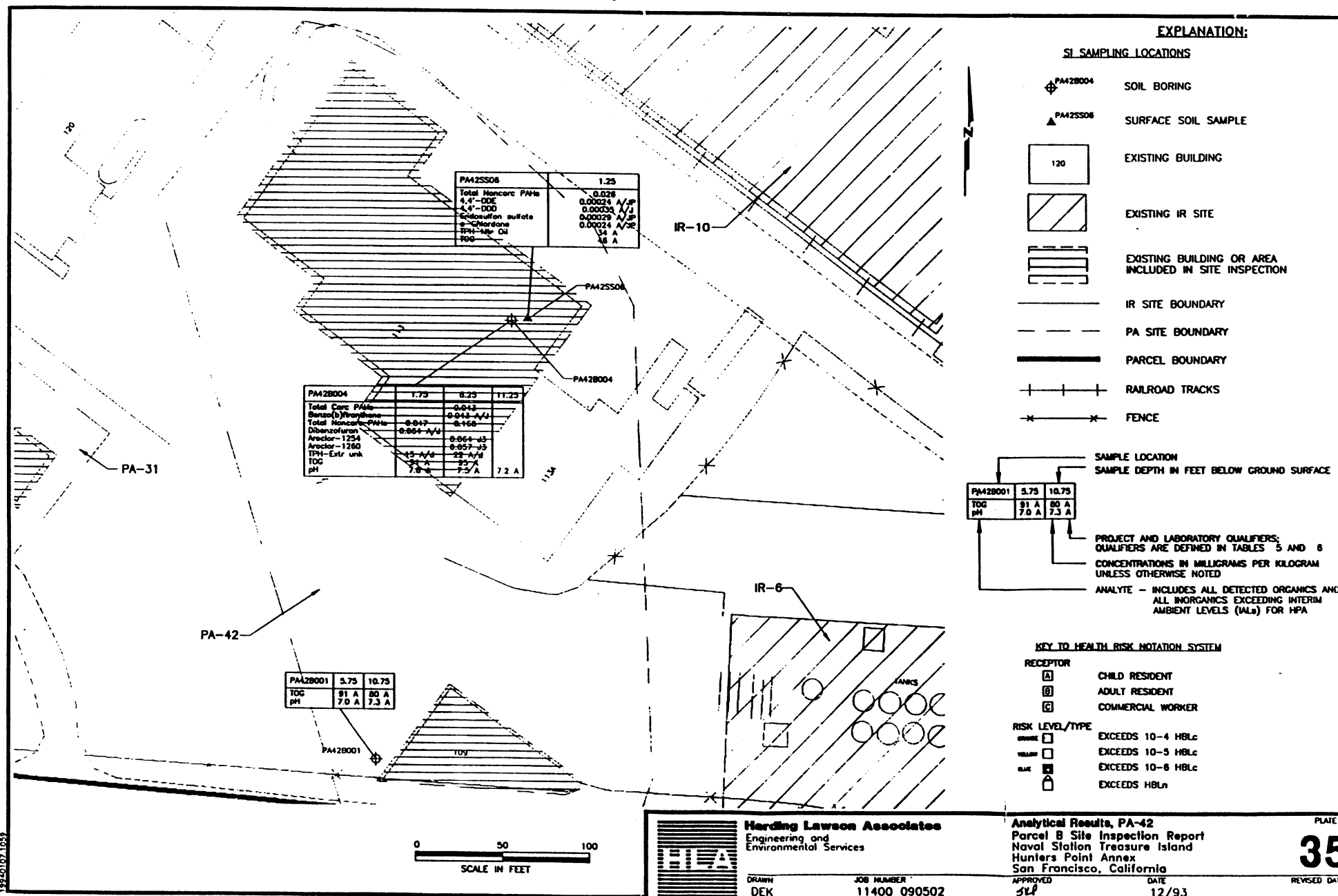
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INDIA BASIN

SEE PLATE 8A
FOR EXPLANATION

PA45ST202	STEAMLINE (WATER)	PUMP RETURN (WATER)
1,1-DCE	0.0070 A/J	
TCE	0.0090 A/J	
Benzene	0.041 A	
4M2pentanene	0.021 A	
Toluene	0.11 A	
Chlorobenzene	0.014 A/J	
Ethylbenzene	0.014 A/J	
Xylenes	0.26 A	
Nonane PAHs	0.27	
Phenols	0.19 A/J	
4-alpha phenol	0.13 A/J	
2,4-Dimphenol	0.13 A/J	
TPH-Diesel	9.7 A	
TPH-Gasoline	2.2 A	
TPH-TU Recv	2.2 A	
Ba	2.76842 A	
K	224.536 A	
Na	5716.33 A	
TU Asbes (ma/l)	3.0 A	

0 200 400
SCALE IN FEET

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8B

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INDIA BASIN

EXPLANATION:

SI SAMPLING LOCATIONS

PA48T11

TEST PIT; SYMBOL DOES NOT REPRESENT

LOCATION OF NEW FUEL LINES

LOCATION OF ABANDONED FUEL LINES

LOCATION OF UTILIDOR WITH ABANDONED LUBE OIL LINES

SUSPECTED FUEL LINE; CONFIRMED NOT PRESENT

130

EXISTING BUILDING

EXISTING BUILDING OR AREA INCLUDED IN SITE INSPECTION

EXISTING IR SITE

155

LOCATION OF FORMER BUILDING

IR SITE BOUNDARY

PA SITE BOUNDARY

PARCEL BOUNDARY

RAILROAD TRACKS

FENCE

LINE OF LITHOLOGIC CROSS SECTION
SEE PLATE 14

0 200 400
SCALE IN FEET

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PLATE

10

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EXPLANATION:

SI SAMPLING LOCATIONS

PA46TA01

TEST PIT; SYMBOL DOES NOT REPRESENT TRUE LENGTH OF TEST PIT

LOCATION OF NEW FUEL LINES
LOCATION OF ABANDONED FUEL LINES
LOCATION OF UTILIDOR WITH ABANDONED LUBE OIL LINES

110

EXISTING BUILDING

EXISTING BUILDING OR AREA INCLUDED IN SITE INSPECTION

EXISTING IR SITE

155

LOCATION OF FORMER BUILDING

IR SITE BOUNDARY

PA SITE BOUNDARY

PARCEL BOUNDARY

RAILROAD TRACKS

FENCE

SAMPLE LOCATION

SAMPLE DEPTH IN FEET BELOW GROUND SURFACE

PA46TA10	2.25
Aroclor-1260	15 J5/P
TPH-Diesel	19 A
TPH-Til Recv	57 A
Pb	198.25 A/+
Zn	810.81 A

PROJECT AND LABORATORY QUALIFIERS.
QUALIFIERS ARE DEFINED IN TABLES F-48 AND F-49
CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM
UNLESS OTHERWISE NOTED

ANALYTE - INCLUDES ALL DETECTED ORGANICS AND
ALL INORGANICS EXCEEDING INTERIM
AMBIENT LEVELS (IALs) FOR HPA

KEY TO HEALTH RISK NOTATION SYSTEM

RECEPTOR

- ☐ CHILD RESIDENT
- ☐ ADULT RESIDENT
- ☐ COMMERCIAL WORKER

RISK LEVEL/TYPE

- ☐ EXCEEDS 10-4 HBLc
- ☐ EXCEEDS 10-5 HBLc
- ☐ EXCEEDS 10-6 HBLc
- ☐ EXCEEDS HBLn

0 100 200
SCALE IN FEET

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DEK

JOB NUMBER
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WJM

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12/13

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PA46TA10	2.25
Aroclor-1260	15 J5/P
TPH-Diesel	19 A
TPH-Til Recv	57 A
Pb	198.25 A/+
Zn	810.81 A
pH	7.6 A

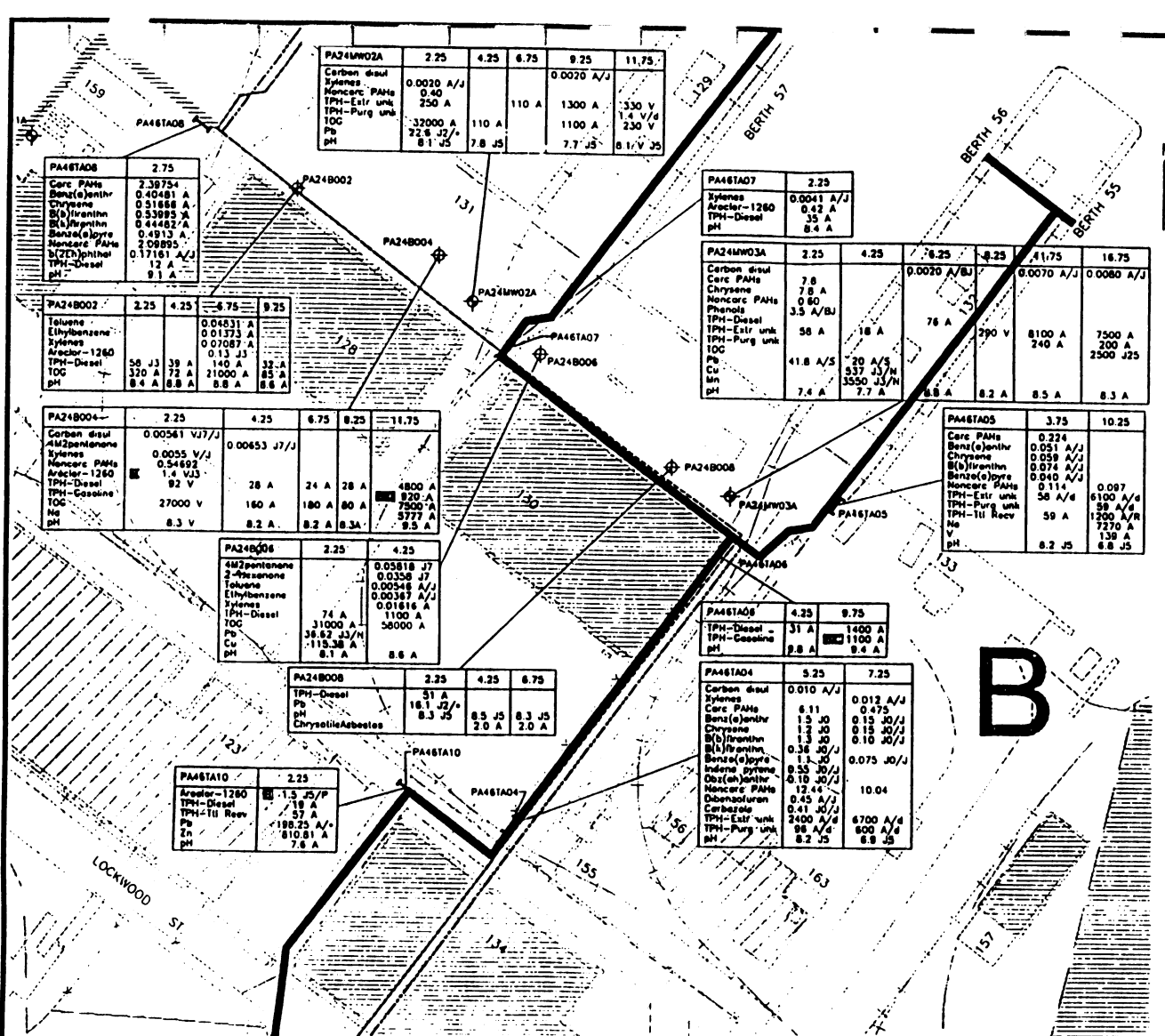
PA46TA04	5.25	7.25
Carbon disul	0.010 A/J	0.012 A/J
Xylenes	6.11	0.475
Core PAHs	1.5 J0	0.15 J0/J
Benz(a)anthr	1.2 J0	0.15 J0/J
Chrysene	1.3 J0	0.10 J0/J
B(b)fluoranth	0.36 J0/J	
Benz(a)pyre	1.1 J0	0.075 J0/J
Indene pyrene	0.55 J0/J	
Dibenz(a)anthr	0.10 J0/J	
Noncarc PAHs	12.46	10.04
Dibenzofuran	0.45 A/J	
Carbazole	0.41 J0/J	
TPH-Extr unk	2400 A/d	6700 A/d
TPH-Purg unk	98 A/d	500 A/d
TPH-Til Recv	480 A/R	3100 A/Rd
pH	6.2 J5	6.8 J5

PA46TA11	2.25
Aroclor-1260	19 J35
TPH-Diesel	14 A
TPH-Til Recv	64 A
Cu	128.98 JA/E
Pb	237.18 A/+
Zn	807.82 A
pH	7.7 A

PA46TA02	2.25
PCE	0.0030 A/J
Core PAHs	0.32
B(b)fluoranth	0.18 A/J
Benz(a)pyre	0.16 A/J
Noncarc PAHs	0.27
Aroclor-1260	0.088 J3
TPH-Extr unk	13000 A
TPH-Purg unk	57 A
TPH-Til Recv	5100 J5/Rd
Pb	247 A
Sb	61.2 J3
Cu	205 J3/N
Zn	845 A/+
pH	7.1 A

PA46TA03	2.75	6.75
Aroclor-1260	0.0060 V/BJ	16.81
Noncarc PAHs	0.107	2900 A
TPH-Diesel		
TPH-Extr unk	450 V	870 A
TPH-Purg unk	130 VJ5	1000 J5/Rd
TPH-Til Recv	8 A	6.7 A
pH		

PA46TA01	2.25
Benzene	0.0060 A/J
Ethylbenzene	0.15 A
Xylenes	0.074 A
Noncarc PAHs	36.1
Dibenzofuran	0.80 A/J
Aroclor-1260	0.017 J3/J
TPH-Extr unk	25000 A
TPH-Purg unk	1500 A
TPH-Til Recv	12000 J5/Rd
Pb	205 A
Sb	25.4 J3
Zn	833 A/+
pH	7.4 A



PA24BW02A	2.25	4.25	6.75	9.25	11.75
Carbon disul	0.0020 A/J			0.0020 A/J	
Xylenes	0.40				
Monocore PAHs	250 A				
TPH-Estr unk	32000 A	110 A	110 A	1300 A	330 V
TPH-Purg unk	72.6 J2/J			1100 A	1.4 V/d
TOC	8.1 J5	7.8 J5		7.7 J5	8.1 V J5
Pb					
Cu					
pH					

PA46TA08	2.75
Carbon disul	2.30754
Xylenes	0.40481 A
Monocore PAHs	0.51668 A
TPH-Estr unk	0.53985 A
TPH-Purg unk	0.44482 A
TOC	0.4913 A
Pb	2.08895
Cu	0.17161 A/J
pH	9.1 A

PA24B002	2.25	4.25	6.75	9.25
Toluene				
Ethylbenzene	0.04631 A			
Xylenes	0.01373 A			
Monocore PAHs	0.07087 A			
TPH-Estr unk	0.13 J3			
TPH-Purg unk	140 A	32 A		
TOC	58 J3	39 A	85 A	8.6 A
Pb	320 A	72 A	21000 A	85 A

PA24B004	2.25	4.25	6.75	8.25	11.75
Carbon disul	0.00561 V/J				
Xylenes	0.0055 V/J				
Monocore PAHs	0.54692				
TPH-Estr unk	1.4 V/J				
TPH-Purg unk	92 V	28 A	24 A	28 A	4800 A
TOC	27000 V	160 A	180 A	80 A	920 A
Pb	8.3 V	8.2 A	8.2 A	8.3 A	5777 A
Cu					9.5 A
pH					

PA24B006	2.25	4.25
4-Methylpentanone	0.05818 J7	
2-Pentanone	0.0358 J7	
Toluene	0.00548 A/J	
Ethylbenzene	0.00387 A/J	
Xylenes	0.01818 A	
TPH-Estr unk	74 A	
TPH-Purg unk	31000 A	1100 A
TOC	38.62 J3/N	56000 A
Pb	115.38 A	
Cu	8.1 A	8.6 A
pH		

PA24B008	2.25	4.25	6.75
TPH-Diesel	31 A		
Pb	16.1 J2/J		
pH	8.3 J5	8.5 J5	8.3 J5
Chrysotile/Asbestos		2.0 A	2.0 A

PA46TA10	2.25
Araclor-1260	1.5 J5/P
TPH-Diesel	19 A
TPH-Til Recv	57 A
Pb	188.25 A/J
Zn	810.81 A
pH	7.6 A

PA46TA07	2.25
Xylenes	0.0041 A/J
Araclor-1260	0.42 A
TPH-Diesel	35 A
pH	8.4 A

PA24BW03A	2.25	4.25	6.25	8.25	11.75	16.75
Carbon disul	7.8		0.0020 A/B/J		0.0070 A/J	0.0080 A/J
Xylenes	7.8 A					
Chrysotile	0.60					
Monocore PAHs	3.5 A/B/J					
TPH-Estr unk	56 A	18 A	76 A	290 V	8100 A	7500 A
TPH-Purg unk	56 A	18 A	76 A	290 V	240 A	200 A
TOC	41.8 A/S	20 A/S	537 J3/N	3550 J3/N	2500 J25	
Pb	7.4 A	7.7 A	8.8 A	8.2 A	8.5 A	8.3 A
Cu						
pH						

PA46TA05	3.75	10.25
Carbon disul	0.224	
Xylenes	0.051 A/J	
Monocore PAHs	0.059 A/J	
TPH-Estr unk	0.074 A/J	
TPH-Purg unk	0.040 A/J	
TOC	0.114	
Pb	58 A/d	6100 A/d
Cu	59 A	58 A/d
pH	8.2 J5	1200 A/R
		7270 A
		138 A
		6.8 J5

PA46TA06	4.25	9.75
TPH-Diesel	31 A	1400 A
TPH-Gasoline	9.8 A	1100 A
pH	8.4 A	9.4 A

PA46TA04	5.25	7.25
Carbon disul	0.010 A/J	0.012 A/J
Xylenes	6.11	0.475
Monocore PAHs	1.5 J0	0.13 J0/J
TPH-Estr unk	1.3 J0	0.18 J0/J
TPH-Purg unk	1.3 J0	0.10 J0/J
TOC	0.36 J0/J	
Pb	1.1 J0	
Cu	8.55 J0/J	0.075 J0/J
pH	6.10 J0/J	
Monocore PAHs	12.44	10.04
Obsoleture	0.45 A/J	
Carbazole	0.41 J0/J	
TPH-Estr unk	2400 A/d	6700 A/d
TPH-Purg unk	96 A/d	800 A/d
pH	8.2 J5	6.9 J5

EXPLANATION:

SI SAMPLING LOCATIONS

- PA24B002 SOIL BORING
- PA24BW02A A-AQUIFER MONITORING WELL
- PA46TA01 TEST PIT; SYMBOL DOES NOT REPRESENT TRUE LENGTH OF TEST PIT
- LOCATION OF NEW FUEL LINES
- LOCATION OF ABANDONED FUEL LINES
- LOCATION OF UTILIDOR WITH ABANDONED LUBE OIL LINES
- SUSPECTED FUEL LINE; CONFIRMED NOT PRESENT
- EXISTING BUILDING
- EXISTING BUILDING OR AREA INCLUDED IN SITE INSPECTION
- EXISTING IR SITE
- LOCATION OF FORMER BUILDING
- IR SITE BOUNDARY
- PA SITE BOUNDARY
- RAILROAD TRACKS
- FENCE
- SAMPLE LOCATION
- SAMPLE DEPTH IN FEET BELOW GROUND SURFACE

PROJECT AND LABORATORY QUALIFIERS:
 QUALIFIERS ARE DEFINED IN TABLES F-4B AND F-4C
 CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM
 UNLESS OTHERWISE NOTED
 ANALYTE - INCLUDES ALL DETECTED ORGANICS AND ALL INORGANICS EXCEEDING INTERIM AMBIENT LEVELS (IALs) FOR HPA

KEY TO HEALTH RISK NOTATION SYSTEM

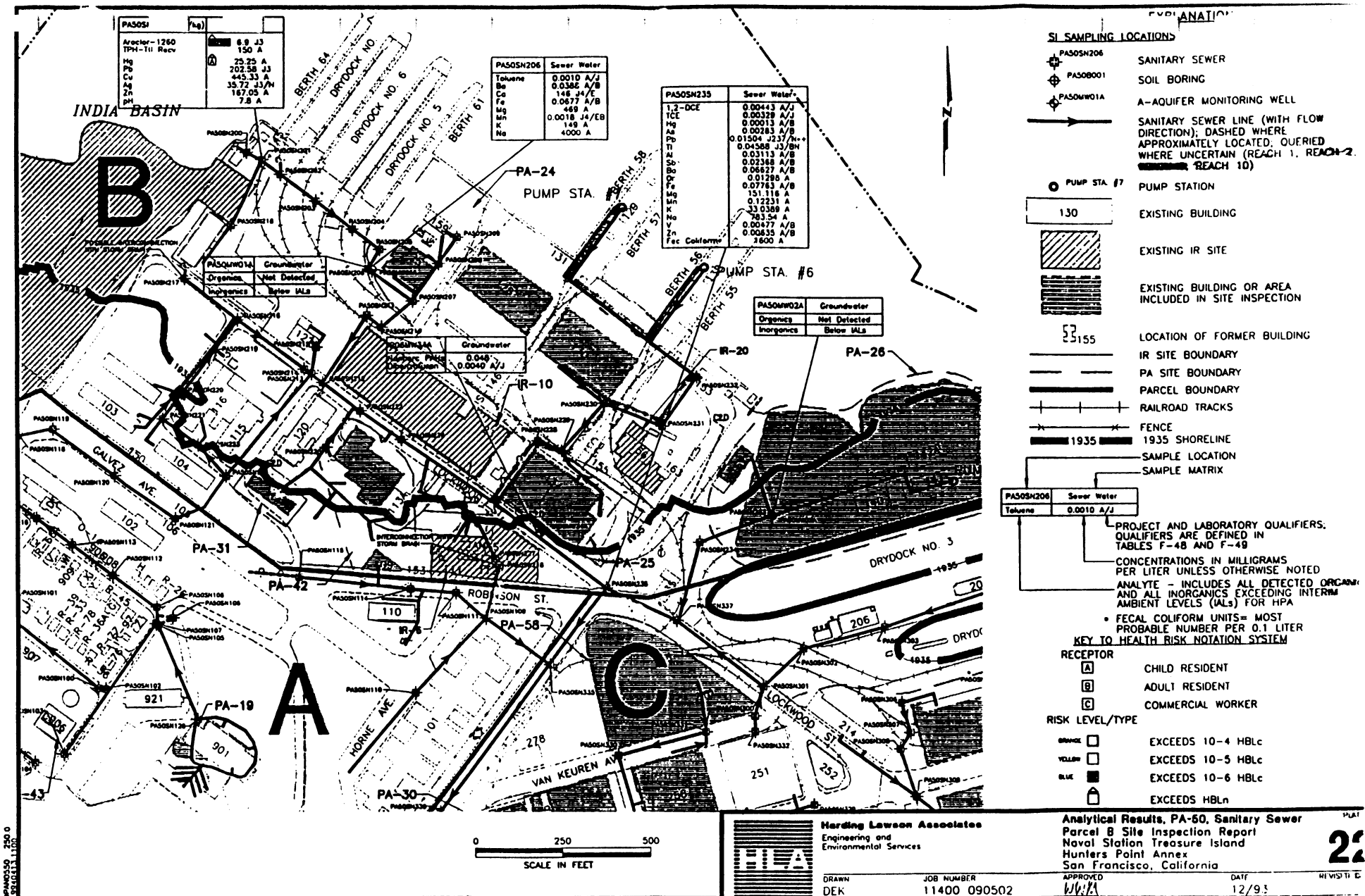
- RECEPTOR
 - A CHILD RESIDENT
 - B ADULT RESIDENT
 - C COMMERCIAL WORKER
- RISK LEVEL/TYPE
 - EXCEEDS 10-4 HBLc
 - EXCEEDS 10-5 HBLc
 - EXCEEDS 10-6 HBLc
 - EXCEEDS HBLn



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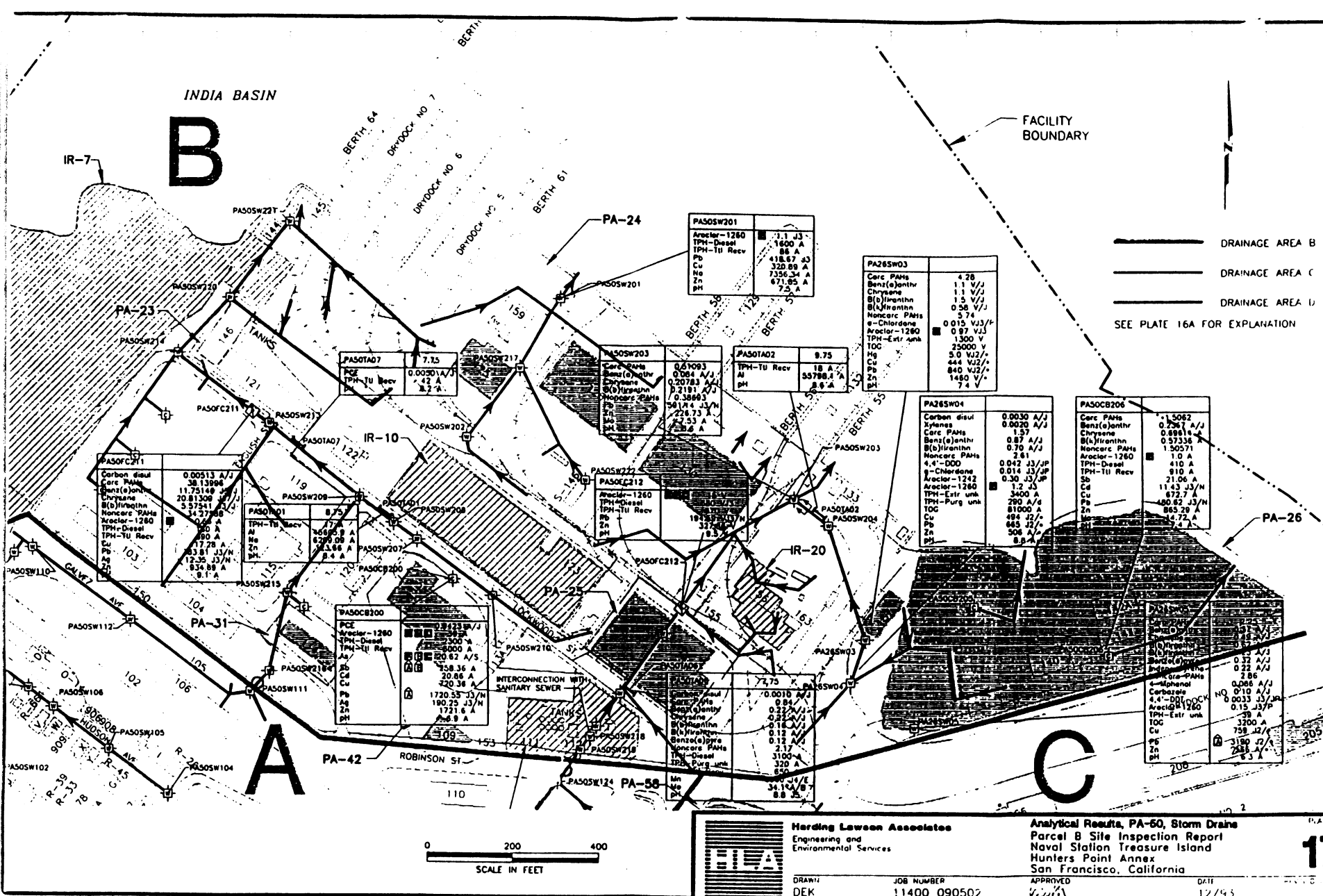


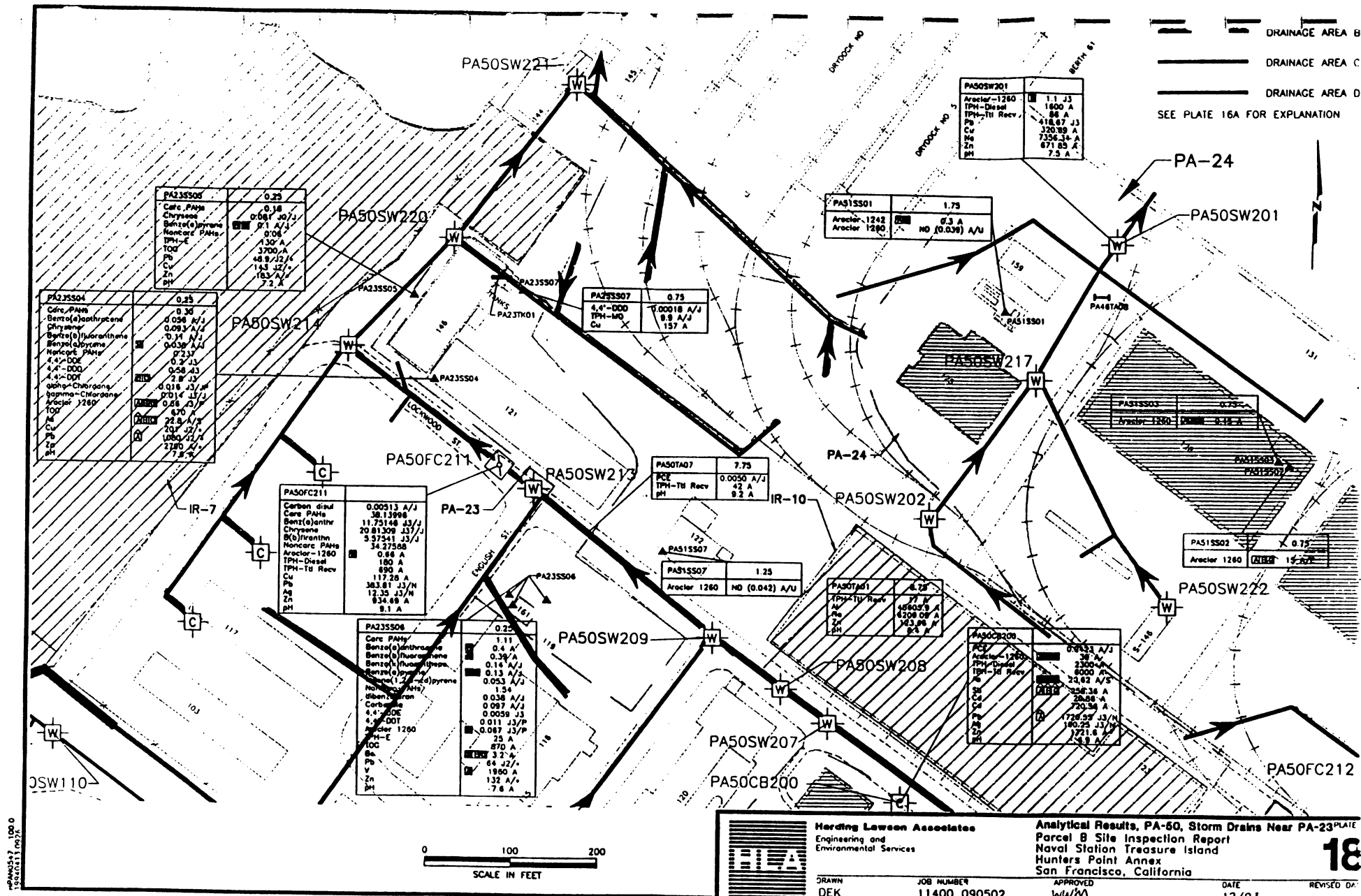
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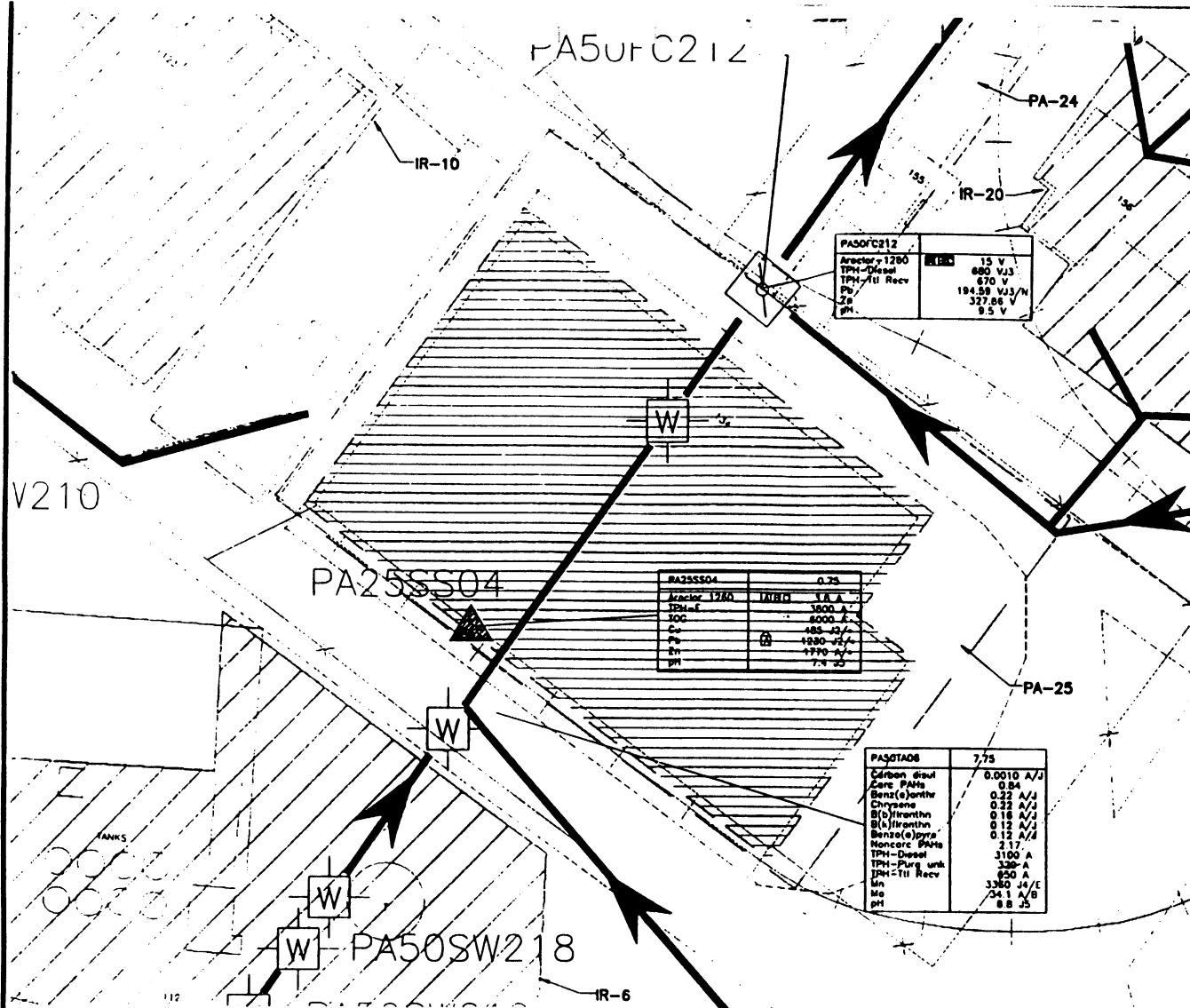
— FACILITY
BOUNDARY

DRAINAGE AREA (1)

SEE PLATE 16A FOR EXPLANATION







— DRAINAGE AREA B
 — DRAINAGE AREA D
 SEE PLATE 16A FOR EXPLANATION

0 50 100
 SCALE IN FEET



Harding Lawson Associates
 Engineering and
 Environmental Services

Analytical Results, PA-50, Storm Drains Near PA-25 PLAT
 Parcel B Site Inspection Report
 Naval Station Treasure Island
 Hunters Point Annex
 San Francisco, California

19

DRAWN DEK
 JOB NUMBER 11400 090502

APPROVED
 [Signature]

DATE 12/93

REVISED BY

APPENDIX B

Building Profiles

HLA

SA
Pot Cont.
①

A1.1.8 SA-83: Test Facility

Site Name: Test Facility

Plate Number: Not applicable

Building Number: 113A

Work Plan Table Number: Not applicable

Location: Parcel B, adjacent to Building 113

Owner/Operator: U.S. Navy. Currently leased by Smith-Emery Company.

General Site Description: Concrete building with attached trailers. Labeled Building 113A onsite map and 114 in field. Occupied by Smith-Emery Company since 1978 and used as a concrete, soil, and window testing facility.

Description of Site or Specific Hazardous Material/Waste Managing Units within Site/Facility/Unit

Type: Laboratory Testing Facility

Administrative Status: Active

Purpose: Test soils, concrete, and windows for physical properties

Period of Operation: Unknown to present. Current tenant since 1978.

Primary Structures/Equipment: Steam room, curing room, saw, hydraulic presses

Dimensions: 50 by 80 feet, plus two attached trailers as offices

Volume or Capacity: Not applicable

Construction: Concrete

Associated Equipment: None

Secondary Containment Structures: Concrete floor

Operation: Test Facility

Materials Managed

Type of Material: Concrete, soils, radioactive soils, oils for machines, glass

Material Usage Rate: Unknown

Origin and Destination of Materials: Unknown

Constituents of Potential Concern: Oils, radioactive soils

Prior Environmental Actions: Several borings around building drilled as part of PA-42 investigation and wells installed as part of IR-6 and IR-10 activities.

Results of HLA Evaluation:

Document review and Interviews: According to Mr. Don Brown, radioactive material was used in this building. X-rays were taken and developed in this building.

Site Observations: Concrete floor throughout, no sumps or drains. Building currently used for testing of concrete, soils, and windows. Several large pieces of equipment for testing; site operator says these were originally used by the Navy until 1978 when they began renting. Several offices, storage rooms, and a curing and steam room for concrete are inside. A separate closet exists for radioactive soil samples. Asphalt paved outside. Yard has storage of scrap metal and in two areas has approximately twenty 55-gallon drums in relatively good condition. The drums appear to contain liquids; some are empty, some are full. According to the tenant, the drums are theirs. There are also some overhead steam pipes.

Evaluation of Release Potential:

Soil: Moderate, building has concrete floor with no cracks or drains, no visible leakage of hazardous materials on outside patchy asphalt.

Surface Water: Low, no hazardous material storage near storm drains

Groundwater: Moderate, building has concrete floor, no visible leakage of hazardous materials on outside patchy asphalt

Atmosphere: Low, no visible emissions from current tenant

Preliminary Recommendations: Housekeeping - dispose drums and scrap metal. Evaluate for inclusion in asbestos abatement program.

Hunters Point Annex**Building Profiles**

BUILDING SUMMARY

Building No. 125

Site ID: B-01

Building Description:

Construction Date: 1944

Square Footage: 10416

Construction Materials: wood

SURVEY SUMMARY

Has a Chemical Inventory been done in/around Building? YES

Number of Chemicals Noted in Inventories: 0

Has a Waste Generation Study been done at Building? YES

Number of Wastes associated with building: 0

Has an asbestos survey been done in/around building? YES

Is asbestos known to exist in/around building? DATA NOT YET AVAILABLE

Has a lead survey been conducted in/around building? NO

Has a PCB survey been conducted in/around building? YES

Does any PCB bearing electrical equipment remain in/around building? NO

HISTORICAL USES:Navy Use: Through 1974

Submarine cafeteria

Leased Use: Post 1974

Cabinetmaker/sculptor

Vinegar production

CHEMICAL INVENTORY INFORMATION:Chemical Type: Inventory Date:Not applicable

WASTE GENERATION INFORMATION:

Waste Type: Disposal Location:
None Known

POTENTIAL PCB BEARING ELECTRICAL EQUIPMENT

<u>Equipment Type</u>	<u>Serial #</u>	<u>Coolant</u>	<u>PCB Conc.</u>	<u>Removal Date</u>	<u>Leaked?</u>	<u>Staining?</u>
TRANSFORMER	385689	OIL	0	00/00/00	NO	NO
TRANSFORMER	385747	OIL	0	00/00/00	NO	NO
TRANSFORMER	PCV8539-15	PCB OIL	NA	10/15/87	NO	NO

AIR TOXICS INFORMATION:

Emission Source Permit # Emission Type
None Known

ASBESTOS INFORMATION:

Description Location Quantity Condition Friability
None Known

REFERENCES:

- Directory of Small Businesses and Fine Arts Professionals at Hunters Point Shipyard. 1987.
- Harding Lawson Assoc. 1991. Site Inspection Work Plan: PA Other Areas / Utilities. Volume III of III: 26 Sites. Naval Station Treasure Island, Hunters Point Annex. San Francisco, CA.
- Harding Lawson Assoc. 1990. Preliminary Assessment Other Areas / Utilities. Two Volumes. Naval Station Treasure Island, Hunters Point Annex. San Francisco, CA.
- U.S. Navy. 1992. P-164 Detailed Inventory of Naval Shore Facilities. September 1992.
- YEI Engineers. 1989. Westec Utility Technical Study. Phase 2. Electrical equipment Containing Oil Master Inventory, Survey and Report for Naval Station Treasure Island, Hunters Point Annex. San Francisco, CA. February 1989.

BUILDING SUMMARY

Building No. 128

Site ID: B-06

Building Description:

Construction Date: 1944
Square Footage: 24120
Construction Materials: wood

SURVEY SUMMARY

Has a Chemical Inventory been done in/around Building?	YES
Number of Chemicals Noted in Inventories:	0
Has a Waste Generation Study been done at Building?	YES
Number of Wastes associated with building:	0
Has an asbestos survey been done in/around building?	YES
Is asbestos known to exist in/around building?	DATA NOT YET AVAILABLE
Has a lead survey been conducted in/around building?	NO
Has a PCB survey been conducted in/around building?	YES
Does any PCB bearing electrical equipment remain in/around building?	NO

HISTORICAL USES:Navy Use: Through 1974

Shop services & work control center #1, substation "U"

Leased Use: Post 1974Pipeline maintenance service

CHEMICAL INVENTORY INFORMATION:Chemical Type: Inventory Date:

Not applicable

WASTE GENERATION INFORMATION:

Waste Type: Disposal Location:
None Known

POTENTIAL PCB BEARING ELECTRICAL EQUIPMENT

<u>Equipment Type</u>	<u>Serial #</u>	<u>Coolant</u>	<u>PCB Conc.</u>	<u>Removal Date</u>	<u>Leaked?</u>	<u>Staining?</u>
TRANSFORMER	03704	UNKNOWN	NA	00/00/00	YES	YES
TRANSFORMER	03709	UNKNOWN	NA	00/00/00	YES	YES

AIR TOXICS INFORMATION:

Emission Source Permit # Emission Type
None Known

ASBESTOS INFORMATION:

<u>Description</u>	<u>Location</u>	<u>Quantity</u>	<u>Condition</u>	<u>Friability</u>
None Known				

REFERENCES:

Directory of Small Businesses and Fine Arts Professionals at Hunters Point Shipyard. 1987.

Harding Lawson Assoc, 1990. Preliminary Assessment Other Areas / Utilities. Two Volumes. Naval Station Treasure Island, Hunters Point Annex. San Francisco, CA. September 1990.

U.S. Navy. 1992. P-164 Detailed Inventory of Naval Shore Facilities. September 1992.

BUILDING SUMMARY

Building No. 134

Site ID: B-07

Building Description:

Construction Date: 1945
 Square Footage: 51716
 Construction Materials: concrete

SURVEY SUMMARY

Has a Chemical Inventory been done in/around Building?	YES
Number of Chemicals Noted in Inventories:	0
Has a Waste Generation Study been done at Building?	YES
Number of Wastes associated with building:	2
Has an asbestos survey been done in/around building?	YES
Is asbestos known to exist in/around building?	DATA NOT YET AVAILABLE
Has a lead survey been conducted in/around building?	NO
Has a PCB survey been conducted in/around building?	YES
Does any PCB bearing electrical equipment remain in/around building?	NO

HISTORICAL USES:

Navy Use: Through 1974

Machine shop & Q&RA, Ind. Lab, nondestructive testing

Leased Use: Post 1974

Refrigeration & AC repair
 Motorcycle repair

CHEMICAL INVENTORY INFORMATION:

Chemical Type: Not applicable
Inventory Date:

WASTE GENERATION INFORMATION:

<u>Waste Type:</u>	<u>Disposal Location:</u>
PENESOLVE 814	COMBINED SEWER
PENESTRIP CR	COMBINED SEWER

POTENTIAL PCB BEARING ELECTRICAL EQUIPMENT

<u>Equipment Type</u>	<u>Serial #</u>	<u>Coolant</u>	<u>PCB Conc.</u>	<u>Removal Date</u>	<u>Leaked?</u>	<u>Staining?</u>
None Known						

AIR TOXICS INFORMATION:

<u>Emission Source</u>	<u>Permit #</u>	<u>Emission Type</u>
None Known		

ASBESTOS INFORMATION:

<u>Description</u>	<u>Location</u>	<u>Quantity</u>	<u>Condition</u>	<u>Friability</u>
None Known				

REFERENCES:

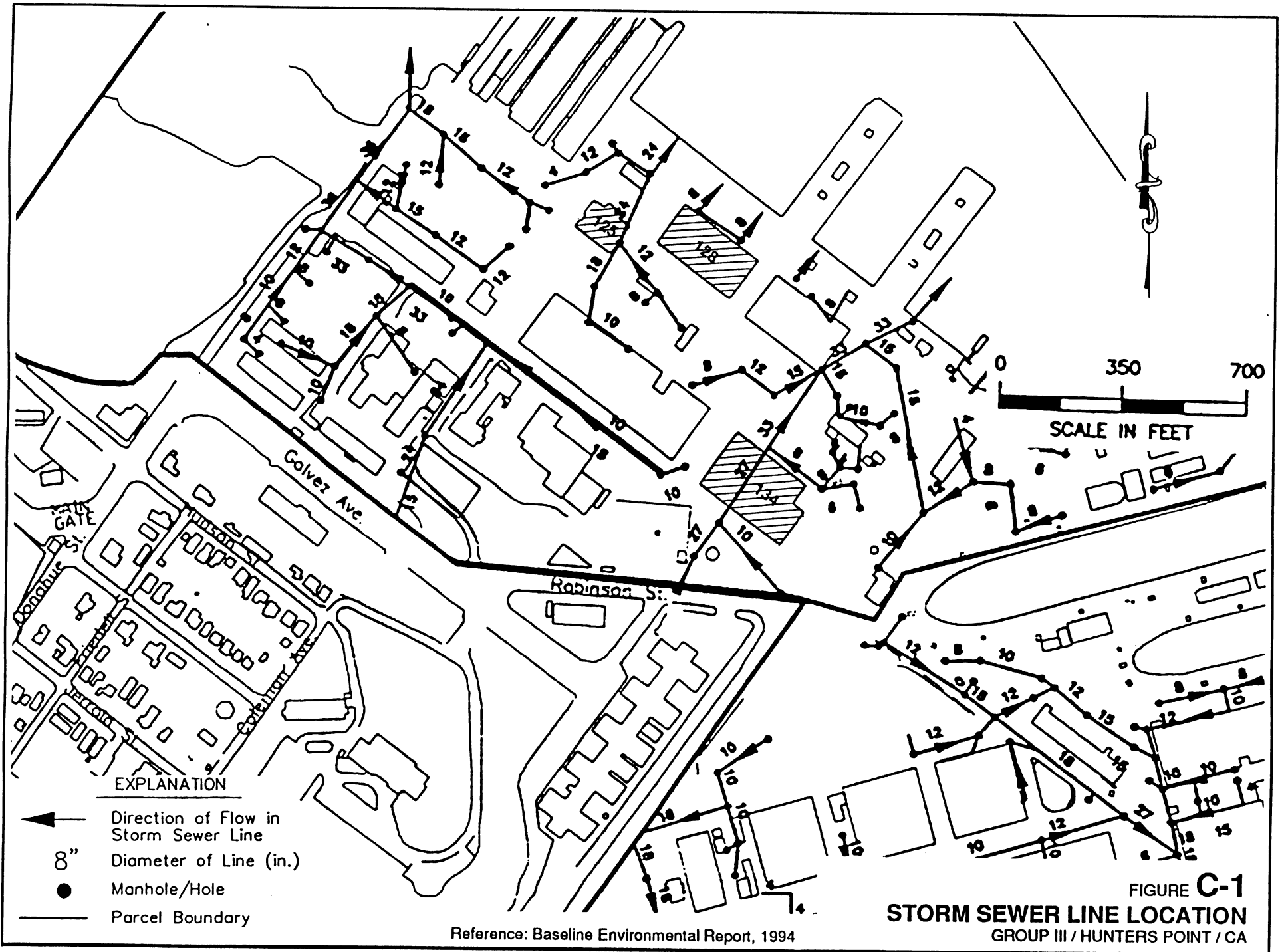
U.S. Navy. 1984. Initial Assessment Study of Hunters Point Naval Shipyard (Disestablished) San Francisco, CA.

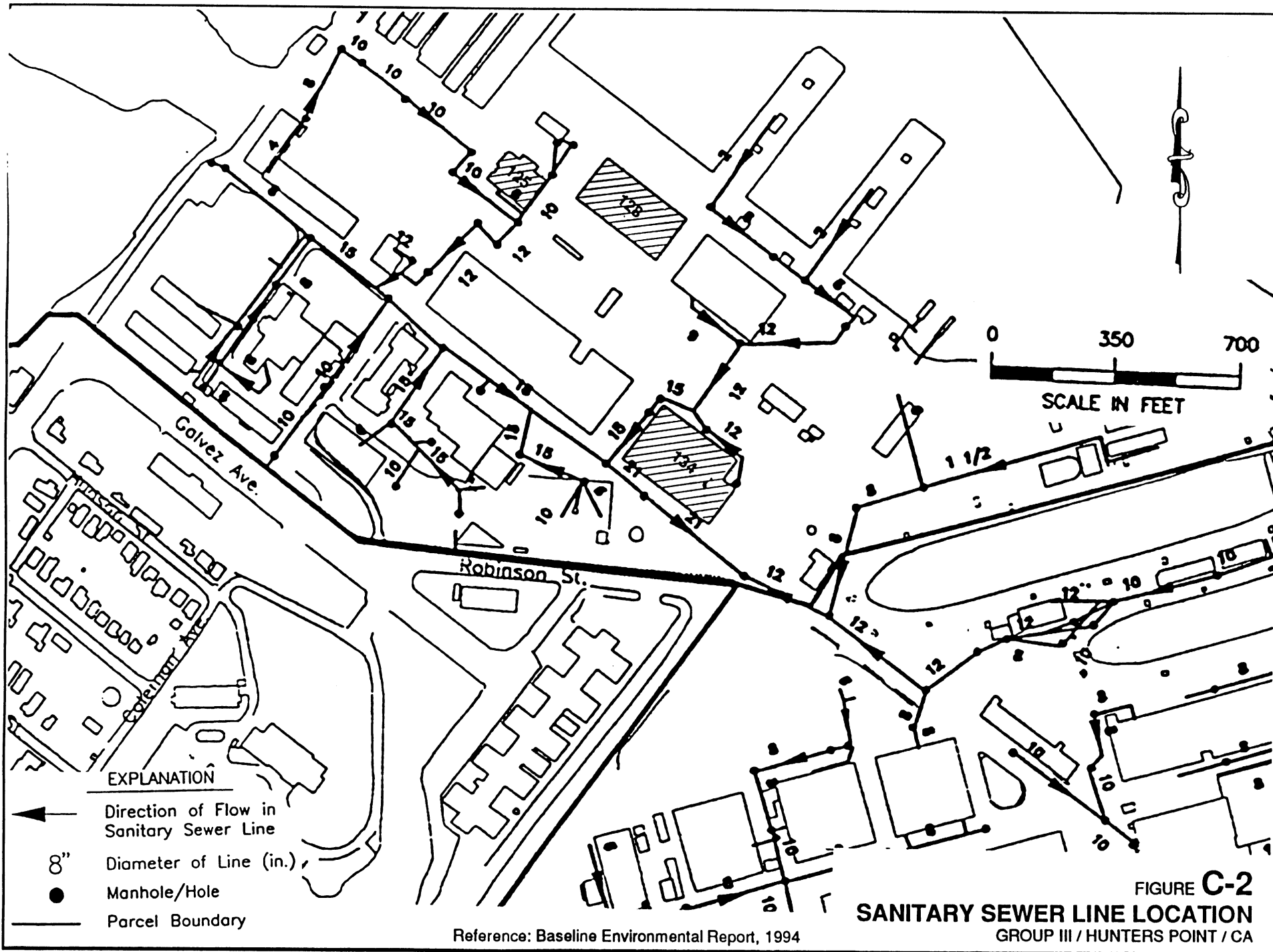
U.S. Navy. 1992. P-164 Detailed Inventory of Naval Shore Facilities. September 1992.

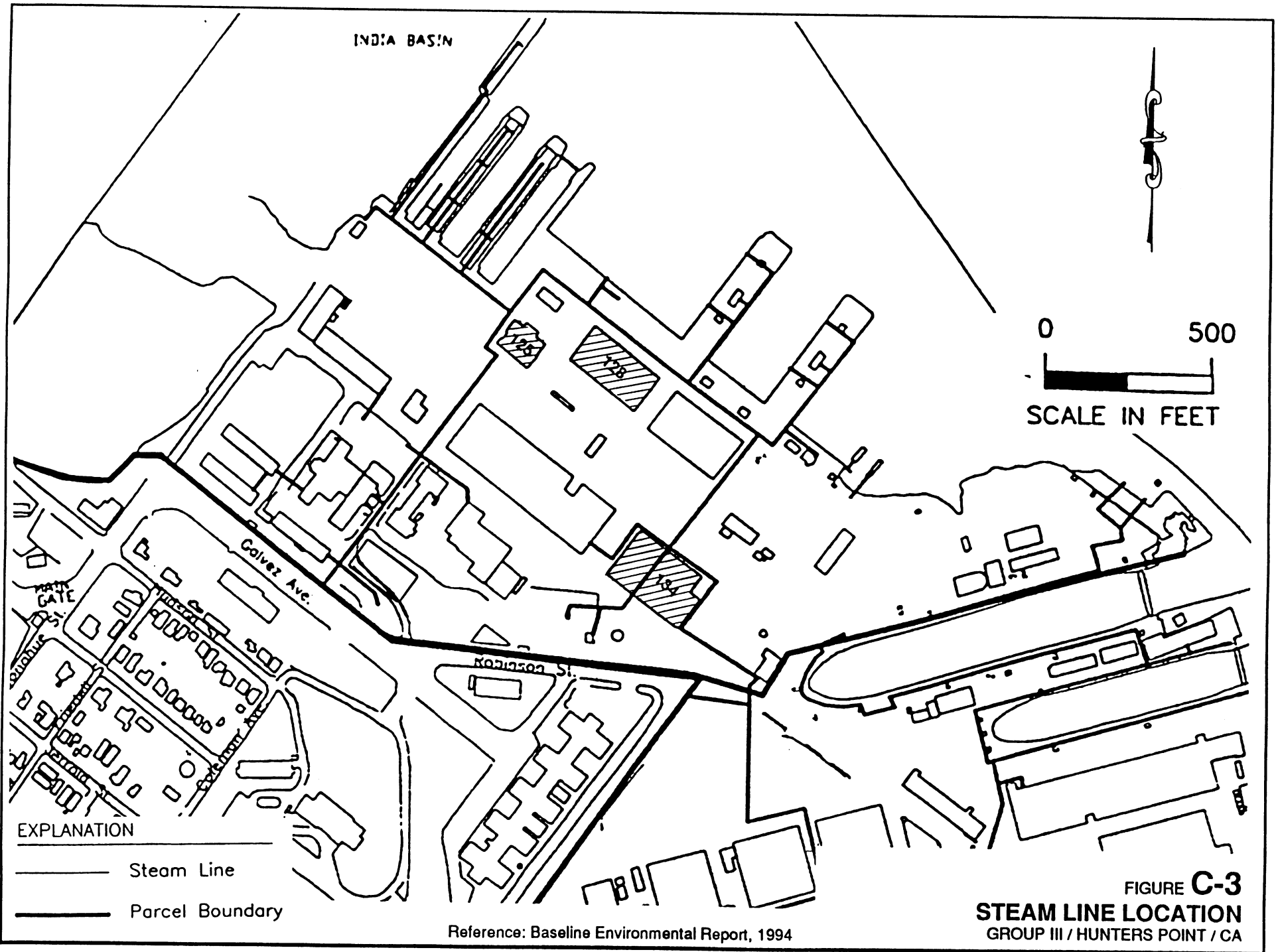
APPENDIX C

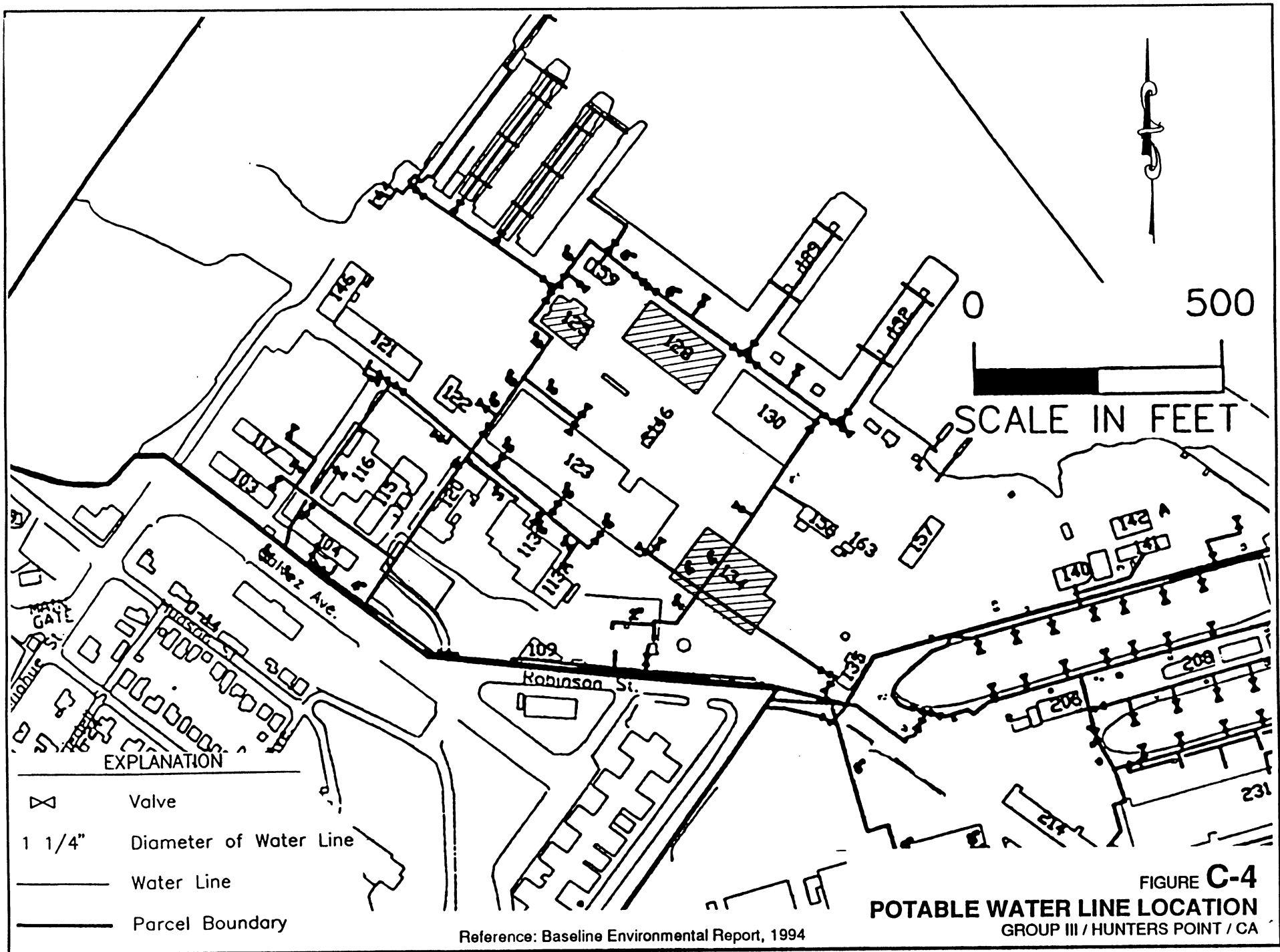
Utility Line Location Maps

- C-1 Storm Sewer**
- C-2 Sanitary Sewer**
- C-3 Steam Lines**
- C-4 Potable Water Lines**









APPENDIX D

DOD Policies



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
200 STOVALL STREET
ALEXANDRIA, VA 22332-2300

He 11/20/94
cc SC
AD
MB

IN REPLY REFER TO

5090
41CM/940286
NOV 15 1994

From: Commander, Naval Facilities Engineering Command


Subj: DOD POLICY FOR ASBESTOS, LEAD PAINT AND RADON AT BRAC PROPERTIES

Encl: (1) USD(A&T) ltr dated 31 Oct 94

1. The Department of Defense policies for asbestos, lead based paint, and radon at BRAC properties was signed on 31 October 1994, they are forwarded in enclosure (1).
2. The policies ostensibly maintained their respective draft formats, which were widely distributed and discussed over the past four months.
3. The Navy position, in simple terms: we will eliminate any immediate threats to human health and/or the environment, which includes taking the proper steps to identify said threats, and comply with all applicable laws. We will not undertake remediation or removal actions that do not fall under those stipulations, except in cases where it is determined to be in the best interest of the Navy. It is important that the field level personnel understand and support this guidance. Interpretation and implementation of particularly the asbestos and lead based paint policy will continue to evolve as specific scenarios and cases of dispute or indecision arise. NAVFACENGCOM will keep you informed of decisions made in these areas, likewise you are requested to keep us appropriately informed of contentious issues that may have a bearing on Navy policy or precedent.
4. Please ensure distribution of enclosure (1) to the BRAC Cleanup Teams (BCTs) under your cognizance.


T. J. ZAGROBELNY
By direction

Distribution:

COMLANTNAVFACENGCOM (18)
COMPACNAVFACENGCOM (18)
COSOUTHNAVFACENGCOM (18)
COSOUTHWESTNAVFACENGCOM (18)
CONORTHNAVFACENGCOM (18)
COENGFLDACT WEST (VINCE CLEMENTI 09E) 
COENGFLDACT NORTHWEST (DAVID CARPENTER 09E)
COENGFLDACT CHESAPEAKE (JOE DELASHO 18)
COENGFLDACT MIDWEST (MARK SHULTZ 900)



ACQUISITION AND
TECHNOLOGY

OFFICE OF THE UNDER SECRETARY OF DEFENSE

**3000 DEFENSE PENTAGON
WASHINGTON DC 20301-3000**



31 OCT 1994

**MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY
(INSTALLATIONS, LOGISTICS & ENVIRONMENT)
ASSISTANT SECRETARY OF THE NAVY
(INSTALLATIONS & ENVIRONMENT)
ASSISTANT SECRETARY OF THE AIR FORCE
(MANPOWER, RESERVE AFFAIRS, INSTALLATIONS &
ENVIRONMENT)
DIRECTOR, DEFENSE LOGISTICS AGENCY**

SUBJECT: Asbestos, Lead Paint and Radon Policies at BRAC Properties

The purpose of this memorandum is to request that you implement the attached Department of Defense (DoD) policies on asbestos, lead paint and radon at base realignment and closure (BRAC) properties.

As you may recall, these policies were drafted and accepted within the Defense Environmental Security Council (DESC) structure. During its May 6, 1994, meeting the DESC accepted the draft DoD policy on radon at BRAC properties. At that meeting, the draft policies on asbestos and lead paint were referred to the Environment, Safety and Occupational Health Policy Board (ESOHPB) for revision and acceptance. During its May 10, 1994, meeting the ESOHPB accepted the revised draft DoD policies on asbestos and lead paint at BRAC properties.

Subsequent to DESC and ESOHPB action, these policies were coordinated formally with the Assistant Secretary of Defense (Economic Security) and the Office of the Deputy General Counsel (Acquisition & Logistics). If there are any questions concerning this request, please contact Ed Dyckman, DESC Executive Secretary at 703-697-9107.

Gary D. Vest

**Principal Assistant Deputy Under Secretary
of Defense (Environmental Security)**

Attachments



DOD POLICY ON ASBESTOS AT BASE REALIGNMENT AND CLOSURE PROPERTIES

Department of Defense (DoD) policy with regard to asbestos-containing material (ACM) is to manage ACM in a manner protective of human health and the environment, and to comply with all applicable Federal, State, and local laws and regulations governing ACM hazards. Therefore, unless it is determined by competent authority that the ACM in the property does pose a threat to human health at the time of transfer, all property containing ACM will be conveyed, leased, or otherwise disposed of as is through the Base Realignment and Closure (BRAC) process.

Prior to property disposal, all available information on the existence, extent, and condition of ACM shall be incorporated into the Environmental Baseline Survey (EBS) report or other appropriate document to be provided to the transferee. The survey report or document shall include:

- reasonably available information on the type, location, and condition of asbestos in any building or improvement on the property;
- any results of testing for asbestos;
- a description of any asbestos control measures taken for the property;
- any available information on costs or time necessary to remove all or any portion of the remaining ACM; however, special studies or tests to obtain this material are not required; and
- results of a site-specific update of the asbestos inventory performed to revalidate the condition of ACM.

Asbestos-containing material shall be remedied prior to property disposal only if it is of a type and condition that is not in compliance with applicable laws, regulations, and standards, or if it poses a threat to human health at the time of transfer of the property. This remediation should be accomplished by the active Service organization, by the Service disposal agent, or by the transferee under a negotiated requirement of the contract for sale or lease. The remediation discussed above will not be required when the buildings are scheduled for demolition by the transferee; the transfer document prohibits occupation of the buildings prior to the demolition; and the transferee assumes responsibility for the management of any ACM in accordance with applicable laws.

DOD POLICY ON LEAD-BASED PAINT AT BASE REALIGNMENT AND CLOSURE PROPERTIES

Department of Defense (DoD) policy with regard to lead-based paint (LBP) is to manage LBP in a manner protective of human health and the environment, and to comply with all applicable Federal, State, and local laws and regulations governing LBP hazards. The Federal requirements for residential structures/dwellings with LBP on Base Realignment and Closure (BRAC) properties differ, depending on: (1) the date of property transfer; and (2) the date of construction of the residential housing being transferred.

DoD policy is to manage LBP at BRAC installations in accordance with either 24 CFR 35 or P.L. 102-550, at the Service's discretion, until January 1, 1995; and, thereafter, solely in accordance with P.L. 102-550. Residential structures/dwellings are as defined in the applicable regulation and any regulation issued pursuant thereto. The Military Components may apply this policy to any other structures they deem appropriate.

On January 1, 1995, and thereafter, the provisions of the Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X of P.L. 102-550) concerning the transfer of Federal property for residential use take effect. These provisions, codified at (in pertinent part) 42 U.S.C. 4822, 4851-4856, and 15 U.S.C. 2688, are applicable to target housing, which is housing constructed prior to 1978, with limited exceptions for housing for the elderly or persons with disabilities or any 0-bedroom dwelling.

Target housing constructed after 1960 and before 1978 must be inspected for LBP and LBP hazards. The results of the inspection must be provided to prospective purchasers or transferees of BRAC property, identifying the presence of LBP and LBP hazards on a surface-by-surface basis. There is no Federal LBP hazard abatement requirement for such property. In addition, prospective transferees must be provided a lead hazard information pamphlet and the contract for sale or lease must include a lead warning statement.

Target housing constructed before 1960 must be inspected for LBP and LBP hazards, and such hazards must be abated. The results of the LBP inspection will be provided to prospective purchasers or transferees of BRAC property identifying the presence of LBP and LBP hazards on a surface-by-surface basis and a description of the abatement measures taken. In addition, prospective transferees must be provided with a lead hazard information pamphlet and the contract for transfer must include a lead warning statement.

The inspection and abatement discussed above will not be required when the building is scheduled for demolition by the transferee and the transfer document prohibits occupation of the building prior to the demolition; the building is scheduled for non-residential use; or, if the

building is scheduled for residential use, the transferee conducts renovation consistent with the regulatory requirements for the abatement of LPB hazards.

Effective January 1, 1995, DoD BRAC properties shall be transferred in accordance with any regulations implementing the Residential Lead-Based Paint Hazard Reduction Act of 1992. The Act also made Federal agencies subject to all Federal, State, interstate, and local substantive and procedural requirements respecting LBP and LBP hazards (see 15 U.S.C. 2688). Therefore, there may be more stringent local requirements applicable to Federal property transfers.

DOD POLICY ON RADON AT BASE REALIGNMENT AND CLOSURE PROPERTIES

In response to concerns with the potential health effects associated with radon exposure, and in accordance with the Indoor Radon Abatement provisions of Subchapter III of the Toxic Substances Control Act, 26 U.S.C. 2661 to 2671, the Department of Defense (DoD) conducted a study to determine radon levels in a representative sample of its buildings. In addition, as part of DoD's voluntary approach to reducing radon exposure, DoD has applied the Environmental Protection Agency (EPA) guidelines for residential structures with regard to remedial actions.

DoD policy is to ensure that any available and relevant radon assessment data pertaining to Base Realignment and Closure (BRAC) property being transferred shall be included in property transfer documents.

DoD policy is not to perform radon assessment and mitigation prior to transfer of BRAC property unless otherwise required by applicable law.